Year of Data and Society in Review

Report to the Office of the Provost

University of Pittsburgh

June 2022

Year of
Data and
Society

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I. Year of Data and Society in Review: Summary and Reflection

Summary

The Year of Data and Society provided the University of Pittsburgh an opportunity to think critically about the data we collect, use, and leave behind as traces, through our scholarly work, education, institutional operations, and digital lives. Over Academic Year 2021-2022, we explored the societal implications of data and its uses, recognizing that data can both empower and marginalize individuals and communities. This year-long conversation and supported activities focused on what MIT professor Sarah Williams calls "data action," or responsible and ethical data practices that benefit the public good.[1]

This document offers an overview of Year of Data and Society documentation activities, events, and funded projects. Over the course of the year, the Year of Data and Society funding opportunity supported 31 projects engaged in research, curriculum development, and programming related to exploring data and its uses through a critical lens. These Pitt faculty, student, and staff-led events, instructional design efforts, investigations, and initiatives were complemented by documentation efforts and a collection of events organized and supported by members of the Year of Data and Society Steering Committee.

The Year of Data and Society was informed by the work of the Pitt Data Science Task Force, which was charged with developing recommendations for the advancement of data science at Pitt. The Task Force's 2021 report emphasizes that "ethics, social responsibility, and social impact of data use" must permeate the data science initiatives at the University.[2] The societal focus of the Year of Data and Society initiative advanced this sentiment, laying groundwork and community awareness that will support data science efforts that follow.

The Year of Data and Society was an effective short-term response to recommendations made by the University of Pittsburgh Data Science Task Force in their 2021 report. One of the four overarching goals articulated by the Task Force was:

"Goal 1: Create shared understanding. *Increase the reputation, visibility, and awareness of responsible data science within and outside the Pitt community. Create a shared and unified understanding of data science and of its importance across disciplines."*[3]

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[1] Sarah Williams, *Data Action: Using Data for Public Good* (Cambridge, MA: The MIT Press, 2020).
[2] "Report of the Data Science Task Force" (January 18, 2021), 2, https://www.provost.pitt.edu/sites/default/files/datascience-report-final-011821.pdf
[3] "Report of the Data Science Task Force," 2.

The creation and fulfillment of the Year of Data and Society Initiative advanced a recommended short-term action for Goal 1. The Year of Data and Society Steering Committee, grant recipients, and programming participants came together to form what the Task Force described as “an initial community” of “data science liaisons” who would “seed, welcome, nourish, and mentor the growth of a larger, inclusive community of individuals using, critiquing, governing, and regulating data science, as well as individuals who have curiosity, new interest, or need for expertise with data, but are finding impediments to doing so.”[4] Moreover, the Year of Data and Society aligned with a second action that the Task Force articulated: to support programming “on uses, methods, ethics, laws, and critique of data and data methods.”[5]

Undoubtedly, the University community found resonance in the theme. 95 individuals registered to attend information sessions about the Year of Data and Society. In addition to the programs funded by the Year of Data and Society grant opportunity and hosted by Pitt faculty, students, and staff, the Steering Committee planned and hosted 18 events that were attended by more than 600 individuals. The 31 projects funded through the three funding cycles involved faculty, students, and staff from 11 of our schools, three of our regional campuses, and several University units.

It is evident that conversations and activities prompted and supported by the Year of Data and Society will continue beyond Academic Year 2021-2022. Examples of impact included sustained programming and initiatives, new educational resources and opportunities, continued attention to responsible governance of student data, research advancement in critical areas of inquiry, and collaborative initiatives.

- **Programming and Initiatives:**
    - The Center for Creativity will continue to collaborate with Pitt faculty and staff in the School of Computing (SCI) and the University Center for Social and Urban Research (UCSUR) and offer regular programming that bridges data and art.
    - With their planning grant, Pitt faculty members Alison Langmead (Department of History of Art and Architecture and SCI), Chelsea Gunn (SCI), Kate Joranson (University Library System), and Annette Vee (Department of English) laid groundwork for a renewed and more sustainable DHRX (Digital Humanities Research initiative) that recognizes the labor of its organizers.

- **Education:** There are several examples of continued attention and engagement with “data and society” in the classroom:
    - In Fall 2022, the Swanson School of Engineering (SSOE) will launch its new course *IE1171 Data for Social Good*, the development of which was funded by the Year of Data and Society and led by SSOE faculty member Amin Rahimian. Graduate and undergraduate students outside of Engineering are able to enroll in the course, and modules on algorithmic bias, data privacy, and data ethics will be

[4] Goal 1, Action 1 in the “Report of the Data Science Task Force,” 2.
[5] Goal 1, Action 2 in the “Report of the Data Science Task Force,” 2.

openly licensed and available on GitHub for adoption and adaptation by other instructors.
    - A team of faculty from the School of Education that included Veena Vasudevan, Tinukwa Boulder, and Beatrice Dias are developing educational modules on critical data literacies, which are informed by their Spring 2022 funded speaker series. These materials will be available for use by instructors.
    - Pitt faculty member Michael Deem (Public Health/Human Genetics), lead on the funded project *Infusing Data Science into the Health Humanities and the Humanities into the Data Sciences*, reports that several members of his project's team will be running a two-year seminar on Data, Ethics, and Society. He writes that they are "partnering with Dr. John Maier (Department of Family Medicine) to run a working group for University faculty and students to discuss selected readings, themes related to the Year of Data and Society, plan future lectures among our respective schools, departments, and centers, and investigate funding opportunities for research."

- **Responsible Governance of Pitt Data**: The Spring 2022 discussions on learning analytics and student data have positioned the Pitt community to be more cognizant of the ethical dimensions of the learning systems we use and data collection. The *Responsible Use of Learning Analytics* project team, composed of Marcia Rapchak (SCI), Amanda Brodish (Office of the Provost), Robert Ackerman and John Radzilowicz (Center for Teaching and Learning) report a number of direct impacts of the Year of Data and Society project, including continued sessions on the topic. They write, "The Provost's Office will monitor issues of access, governance, and opt-out options in the decision-making around learning analytics" and "the Teaching Center and the Office of the Provost will also keep what was learned through these sessions in mind when reviewing contracts with vendors." This heightened consciousness can result in Pitt serving as an exemplar for ethical handling of student data in higher education.

- **Research:** Individual research projects have advanced findings and Pitt's contributions to critical areas of inquiry in impactful ways.
    - For example, Lara Putnam (Department of History), Rachel Rubin (University Library System), Beth Schwanke (Pitt Cyber), and Beth Hoffman's (Graduate School of Public Health) Year of Data and Society-funded investigation of information flows and community resilience to mis- and disinformation, laid meaningful groundwork for continued initiatives by the Pitt Disinformation Lab.
    - Another supported project involving Fanghui Xiao (SCI), Daqing He (SCI), and David Walker (UCSUR) sought to understand what Catherine D'Ignazio describes as "a growing gap between those who can work effectively with data and those who cannot" and to put forth recommendations for open data government programs to address this gap. When implemented, these project recommendations have the potential to broaden the usability of data shared through initiatives like the Pitt-based Western Pennsylvania Regional Data Center.

II. Documentation and Outreach Approaches

We established a Documentation Subcommittee that oversaw storytelling about the Year of Data and Society and the creation of media that documented our activities. Main strategies included a podcast, web stories, event recordings, and the use of D-Scholarship@Pitt, all of which were effective approaches for creating a record of impact:

Information Ecosystems: Podcast Episodes

The Information Ecosystems podcast, begun under the auspices of the Andrew W. Mellon Foundation-funded Sawyer Seminar, continued its second season in collaboration with the Year of Data and Society. This podcast seeks to advance an understanding of where data comes from and how it is used, setting the present moment within a longer history of information supply and its power-laden consequences.

Steering Committee member Alison Langmead and Pitt Ph.D. candidate Briana Wipf led this documentation and storytelling effort. We are pleased to have these recordings as documentation of the conversations generated by the Year of Data and Society and as a record of the initiative.

The episodes in Season 2 of the podcast *Information Ecosystems* included the following discussions, with Briana Wipf serving as the interviewer in episodes 2-8:

Episode 1: Introducing Season Two of Information Ecosystems - A conversation between Alison Langmead and Nora Mattern

Episode 2: Alice Feng and Jonathan Schwabish (co-authors of the *Do No Harm Guide*)- Discussion of contemporary issues of equity awareness in data visualization practices

Episode 3: Mark Hereward (Chief Data Officer at UNICEF): Discussion of data governance and ethics, particularly the tension between data privacy and specificity

Episode 4: Sharon Leon (Michigan State University): Discussion of Leon's digital humanities and linked data work, including the Jesuit Plantation Project II

Episode 5: Marcia Rapchak (School of Computing and Information): Discussion of the ethics surrounding the collection of student data by learning management systems

Episode 6: Sustaining Impact: Sustaining digital projects can be challenging. In this episode, four Pitt researchers discuss why, and why it's so important to try. The interviewees in this episode are Judy L. Cameron, Abhishek Viswanathan, Bridget Keown and Sera Linardi.

Episode 7: Voices of Year of Data and Society Steering Committee: This episode features the work of four members of the Year of Data and Society Steering Committee: Tyrica Terry-Kapral, Liz Monk, Lisa Parker, and Mike Madison.

Episode 8: This episode follows a project undertaken by Homewood Youth-Powered and Engaged (HYPE) Media to research and write a comprehensive Wikipedia page for Westinghouse High School in Pittsburgh. The episode includes discussions about information, power and the Internet; interdisciplinarity in community-engaged work; and the experience of the students involved in the project. The interviewer, Briana Wipf, speaks to Pitt Ph.D. student Elise Silva, faculty members Khirsten L. Scott and Jaime Booth, and students at the Westinghouse Highschool in Pittsburgh about their work on this important initiative.

Web Stories

A second record of the Year of Data and Society are the web stories that we published on the Year of Data and Society website and disseminated through our newsletter and Twitter account. In total, we published 8 web stories about Year of Data and Society programming, which are captured in Appendix E.

Additionally, we were pleased to receive coverage from the University of Pittsburgh's news outlets. *The University Times* and *The Pitt News* published stories on the goals of the initiative, as well as programming and funded projects. These stories included:

- Susan Jones, "'Year of …' initiative will focus on Data and Society in 2021-22" *University Times*, April 28, 2021
- Grace Stringer, "'The greater social good': Preparations underway for the Year of Data and Society," *The Pitt News*, June 25, 2022
- Marty Levine, "Year of Data and Society will focus on people," *University Times,* August 27, 2021
- Donata Massimiani, "Latinx Connect Conference panel discusses Latinx and Afro-Latinx data, Civil Rights advocacy," *The Pitt News*, October 18, 2021
- Donovan Harrell, "Data feminism takes aim at algorithms that discriminate," *University Times*, November 19, 2021
- "Year of Data and Society projects announced," *University Times*, November 19, 2021
- "Year of Data and Society awards second round of projects," *University Times*, January 13, 2022
- Elizabeth Primrose, "'Community of the eager': Pitt's Year of Data and Society plans for spring," *The Pitt News*, January 14, 2022
- "You can Love Data next week or all year at Pitt with upcoming events," *University Times*, February 11, 2022
- "HSLS sponsors open scholarship and research impact challenge," *University Times*, March 17, 2022

- "Third round of Year of Data and Society projects awarded," *University Times*, March 17, 2022

Event Recordings

Recordings of several committee-organized events were published on the Year of Data and Society website under the tab "Explore More." These recordings are hosted in Panopto. To support preservation, these recordings are also available in OneDrive and associated with the yearof@pitt.edu account, managed by the Office of the Provost and the Year of Initiative teams.

D-Scholarship@Pitt

D-Scholarship@Pitt is the open access digital repository of the University of Pittsburgh, managed by the University Library System. The repository supports the long-term storage and maintenance of scholarly works created by University of Pittsburgh faculty, staff, and students. Deposits to D-Scholarship@Pitt can be associated with a University department, program, research group, center, or institute through metadata.

The University Library System added the "Year of Data and Society" as a new group in the repository, allowing for deposits to be associated with this collection and for users to then browse these deposits. We requested permission from poster presenters to deposit their posters presented at the end-of-the-year Celebration of the Year of Data and Society event. In addition, we encouraged our grant recipients to deposit outputs associated with their funded projects in the repository. The Year of Data and Society collection can be viewed in D-Scholarship@Pitt.

Communications Approaches

The Year of Data and Society Steering Committee established an Outreach Subcommittee that developed strategies for communications and shared programming and the funding opportunity with their own University communities. Our outreach strategies included:

Social media use: We created the Twitter account @PittDataSociety in June 2021. We used this account to share events, funding opportunity updates, stories, and podcast episodes. The Sara Fine Institute at SCI will continue to administer this account, sharing University activities and opportunities related to data and society.

Website: With the support of University Marketing and Communications, we created a Pitt-hosted website for the Year of Data and Society: https://www.yearofdataandsociety.pitt.edu/. This website was used to communicate information about events and the funding opportunity, and to share web stories and recordings of events (see our "Explore More" webpage).

University Events Calendar: University Marketing and Communications created a "Year of Data and Society" "group" on the University Events Calendar. The Chair of the Year of Data and

Society Steering Committee had permission to add events to the University Events Calendar and, when events were added, they appeared on the homepage of the Year of Data and Society website. The University Events Calendar was an important communications vehicle for our team; we relied on the Calendar Event as the main web-presence for events to share with the Pitt community.

Monthly Newsletter: We decided that a monthly newsletter would be an effective way to share events, opportunities, and descriptions of funded projects with the University community. We assembled a list of contacts for staff who are responsible for communications within their units and requested their assistance in forwarding a monthly newsletter to their unit's communications channels. We subscribed to Campaign Monitor, an email marketing tool, and included individuals who participated in Year of Data and Society on our recipient list. Our average newsletter "open rate" was 43.7%.[6]

III. Committee-Planned Programming

The Steering Committee established an Events Subcommittee that organized programming to complement and supplement the events funded through the Year of Data and Society grant opportunity. We were committed to planning events that were broadly relevant to our community, that did not require any domain expertise or data science skills for participation, and that supported individuals in recognizing their own connection to data.

Because we anticipated the funding opportunity would lead to more grant-funded programming in the Spring 2022 semester, our subcommittee was mindful of initiating conversation through notable programming in Fall 2021. We were also conscious about highlighting existing data-for-good work being done at the University of Pittsburgh and bringing in voices that would foster conversation about the societal, ethical, and political implications of data.

In September, we initiated the Committee-planned programming by spotlighting the work of the Pitt-based Center for Analytical Approaches to Social Innovation and their community-partnered *412Connect* project; this project offered us an entry to thinking how data science projects can advance social justice.[7] Additional speakers for committee-planned programs included artist and researcher Mimi Ọnụọha, whose work explores the power dynamics and social relationships behind data collection; Professor Catherine D'Ignazio, co-author of the acclaimed *Data Feminism*; and Professor Sharon Leon, who uses linked data to recover the lived experiences of enslaved people in the United States.

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[6] As context for this figure, the email marketing tool MailChimp analyzed email open rates (or the percentage of the recipient list that have opened the email) across industries, and found an average email open rate of 21.33% "Email Marketing Benchmarks and Statistics by Industry, last updated October 2019, https://mailchimp.com/resources/email-marketing-benchmarks/

[7] See web story by Briana Wipf, "Kickoff data and society conversation zeroes in on connecting Black-owned businesses, students," https://www.yearofdataandsociety.pitt.edu/kickoff-data-and-society-conversation-zeroes-connecting-black-owned-businesses-students

In addition to standalone events in Spring 2022, we collaborated with SCI faculty member Kostas Pelechrinis to offer an asynchronous and flexible learning experience for students. Professor Pelechrinis recorded a series of short videos about using data to make predictions and students were invited to apply methods to predict the 2022 Academy Award winners. We supported students as they engaged in this ongoing learning activity, using a Slack channel where students could post questions and receive guidance.

The Committee organized an end-of the year Celebration of the Year of Data and Society, which spotlighted the activities of the project teams supported through the funding opportunity. This hybrid event was held on April 8 in the University Club at the University of Pittsburgh Oakland campus and available for remote participation via Zoom.

The Celebration included a panel on facilitating learning about data, a panel on sustaining the impact of project activities, lightning talks about projects, and a poster session. Briana Wipf covered the event as a web story and recordings of the sessions are available on the Year of Data and Society website:

- Panel on Teaching and Learning, featuring:
    - Na-Rae Han (Department of Linguistics), Project: *Careers in Language Data*
    - Bob Gradeck (University Center for Social and Urban Research), Project: *Developing a Data Science for Social Justice Curriculum at Pitt*
    - Uchenna Mbawuike (Graduate School of Public and International Affairs); Project: *Developing a Data Science for Social Justice Curriculum at Pitt*
    - Veena Vasudevan (School of Education), Project: *Critical Data Literacies for Teaching and Learning Through Praxis*
    - **Moderator**: Sera Thornton (University Center for Teaching and Learning)
- Lightning Talks, featuring:
    - Jessica Ghilani (Pitt Greensburg/Pitt Disinformation Lab), Project: *Understanding Data, Digital Culture, and Disinformatio*n
    - Rosta Farzan (School of Computing and Information), Project: *Black Voices in Computing*
    - Dominic Bordelon (University Library System), Project: *Open Scholarship and Research Impact Challenge*
    - Stephen Quigley (Department of English), Hillary Henry, Holly Plank (School of Education), Project: *"My Nature Outing"*
    - Marcia Rapchak (School of Computing and Information), Project: *Responsible Use of Learning Analytics*
    - Sarah Moore (Film and Media Studies Program), Project: *Exploring the Churchill Valley Greenway Through Visual and Scientific Data Collection*
- Panel on Sustaining Impact of the Year of Data and Society, featuring:
    - Judy Cameron (Department of Psychiatry); Project: *Making Training of Undergraduate Students to be DataJam Mentors More Equitably Available for Students in Under-Served and Under-Resourced Areas*

- Bridget Keown (Gender, Sexuality, and Women's Studies Program), Project: Reclaiming Narratives Through Interdisciplinary Data Collection
- Abhishek Viswanathan (School of Computing and Information), Project: *Enriching Citizen-Science Data Using Context, Feedback, and Community-Oriented Communication*
- **Moderator**: Sera Linardi (Center for Analytical Approaches to Social Innovation & Graduate School of Public and International Affairs)

In addition, posters from the Celebration event are available on D-Scholarship@Pitt, the University of Pittsburgh open access institutional repository.

In total, 18 programs were organized by the Steering Committee, which were joined by funded programming described in the next section. Additionally, we hosted seven information sessions about the Year of Data and Society. ~600 participants attended these Committee-organized events.

The table in Appendix B highlights the programming planned by subcommittee members with links to recordings and documentation, where available.

IV. Funding Opportunity

We used Competition Space to host the funding opportunity and manage the reviews. We launched the call for proposals in late August 2021. We had three deadlines for proposals: October 1, December 1, and February 1. We communicated that we would review applications on a rolling basis in September to jumpstart activity at the University. For applications received on October 1 and for the December 1 and February 1 deadlines, the Steering Committee reviewed applications and notified applicants of funding decisions by the end of a two-week period.

As part of our outreach about the funding opportunity, the Steering Committee ran **seven one-hour information sessions** in the fall and early spring semesters. These sessions included an overview of the aims of the Year of Data and Society, the call for proposal, and how to apply. The sessions also provided time for open discussion and questions about the opportunity. An information session was recorded and made available on the Year of Data and Society website for asynchronous viewing.

Each application was reviewed by two members of the Steering Committee, using the following criteria: (a) alignment with Year of Data and Society theme, (b) value of expected outcomes, (c) the likelihood of achieving outcomes, (d) the project's commitment to DEI values, and (e) how the project would sustain its impact. The reviewers also evaluated the degree to which the application met encouraged criteria, i.e., having: (a) an education focus, (b) involvement of an interdisciplinary team, (c) connection to different Pitt campuses or populations, (d) matching/in-kind funds. Following completion of all reviews, a subcommittee reviewed the recommendations of the reviewers and made funding decisions.

In total, we received 58 completed applications. Grants were made to 31 of the applications.

Faculty, staff, and students in 11 of Pitt's schools and from each regional campus were represented among the funded projects and three of our regional campus:

- Dietrich School of Arts and Sciences
- GSPIA
- Katz Graduate School of Business
- Pitt Honors College
- School of Computing and Information
- School of Education
- School of Health and Rehabilitation Sciences
- School of Medicine
- School of Public Health
- School of Pharmacy
- Swanson School of Engineering
- University of Pittsburgh-Bradford
- University of Pittsburgh-Johnstown
- University of Pittsburgh-Greensburg

Project teams also included representatives from several University units and initiatives, including:

- Center for Bioethics & Health Law
- Center for Teaching and Learning
- Community Engagement Center in Homewood
- Health Sciences Library System
- Office for Equity, Diversity, and Inclusion
- Office of the Provost
- Office of Sponsored Programs
- Pitt Cyber
- University Center for International Studies
- University Center for Social and Urban Research

In the subsequent sections, we share examples of funded events and programming, curriculum development, and research.

Funded Events and Programming

The funding opportunity supported t events for University and broader audiences. Funding recipients contributed a rich collection of programming that complemented the programming organized by the Steering Committee. The following examples – a small selection of these funded activities – highlight the range of topics explored and audiences reached through programming:

- ***Latinx Data:*** In October, Lisa Ortiz (School of Education; Teaching, Learning, and Leading), Gina Garcia (School of Education; Educational Foundations, Organizations, and Policy), Michele Reid-Vazquez (Dietrich School of Arts and Sciences; Africana Studies); and Ronald Idoko (Office for Equity, Diversity, and Inclusion) organized an event titled *Latinx Data: Historical Civil Rights Advocacy and Contemporary Intersectional Insights*. A session in the Latinx and Hispanic Heritage Month's inaugural Latinx Connect Conference, this event was attended by 234 individuals from within and beyond Pittsburgh. The team reports, "**This event demonstrated the interest and need to engage in historical and intersectional conversations by, for, and about Latinx communities and data.** Questions posed during the event related to the transcendence or sustained marker of race as an identifier, the presence of Latinx populations in Rural America, census nuances, colorism in the media, and solidarities between Latin America and the United States across ethnoracial groups. Moreover, institutions that have the power to shape policies and practices can learn from the presentations featured in this event as they consider transforming inequitable structures." A recording of the presentation is available for asynchronous viewing.
- **Responsible Learning Analytics Series**: Through a series of workshops with invited speakers and planned for staff, faculty, students, and an open audience, the project team encouraged socially responsible use of data by inspiring conversation about the data provided via learning technology systems like Canvas. This series explored how to combat bias and follow ethical practices in using learning analytics.
- **Cultivating Critical Data Literacies for Teaching and Learning Through Praxis**: This Spring 2022 virtual speaker series was organized by School of Education faculty members Veena Vasudevan, Tinukwa Boulder, and Beatrice Dias. The series featured scholars from various disciplinary perspectives who work at the intersection of data, technology, society, and equity and whose research examines the pervasive reach of data in our educational lives. This series focused on building critical data literacies, or the ability to deconstruct digital data and understand how data gets collected, interpreted, represented, storied, and marketed. Through the series, the organizers fostered dialogue about the expansive nature of data, to cultivate critical data literacies of faculty, students, and staff, and start a conversation about how we can harness data for advancing equity and justice particularly as it relates to vulnerable communities. The talks were open to all.
- **2022 Super Analytics Challenge:** A Year of Data and Society grant provided support for the 2022 Super Analytics Challenge, hosted by the Joseph M. Katz Graduate School of Business. This year, student participants in the Super Analytics Challenge used data to build an understanding of food insecurity and hunger in our region. The participants shared insights learned through the Challenge with the Pittsburgh Food Bank.
- **Academic Year 2022-2023 Events**: We will continue to see Year of Data and Society-supported programming organized by recipients of funding. These events will include an October 27, 2022 lecture by Claire Wardle on information disorder (organized by SCI Ph.D. student Jamaica Jones and co-hosted with the Carnegie Library of Pittsburgh) and a Fall 2022 Health Informatics Hackathon (organized by faculty member Yanshan Wang of the Department of Health Information Management) that will support

faculty and students in understanding data-driven, algorithmic, and human bias in big data and AI in health sciences.

Curriculum Development

One of the recommendations in the report (2021) of the Pitt Data Science Task Force was to "Catalyze skill acquisition [at Pitt]: Create, support, and incentivize inclusive, flexible undergraduate and graduate educational programs and shared educational resources to offer training in data science – in context of a broad variety of domains – to students, postdocs, staff, and faculty." With this in mind, one of the goals of the Year of Data and Society Steering Committee was to support the development of instructional materials focused on socially responsible data practices.

The Steering Committee reflected this goal in the call for proposals. In total, 6 of the 31 awarded project teams self-identified their projects as curriculum development. Examples of these projects included:

- **Developing a Data Science for Social Justice Curriculum at Pitt** This project resulted in the delivery of a spring 2022 course *Working with Public Interest Technologies and Civic Data*. Through this course, students were prepared to discern the opportunities and challenges that can come from working with technology and civic data, to understand and account for community dynamics, to develop socially-responsible research and data practices, and to implement projects that hold benefits for both community partners and students
- **Curriculum for Introduction to Data Literacy for All Through Applications**: A SCI-led project to produce an introductory data science curriculum that will be openly available and adaptable for integration in courses and that will use engaging applications and fields, like movies, music, transportation, and sports, to build understandings of probability, uncertainty, causality, correlation, seasonality, and data-driven decision making.

These efforts to bring data practices into the classroom through new instructional materials were complemented by the many outside-of-the-classroom experiences that other project teams offered in the form of lectures and workshops.

Research

The Year of Data and Society funding opportunity supported research projects that involved the use of data for public good or the critical study of data and the systems that use it. Two projects serve as clear illustrations of these two types of funded projects:

- **Addressing Water Affordability and Governance Transparency in the Pittsburgh Region with Publicly Available Data:** In this project, Pitt faculty member Marcela González Rivas and postdoctoral researcher Caitlin Schroering collected data to build an understanding of the key features of "good" water governance. Their work is an example

of gathering and analyzing data for a social good. The project team offered a learning opportunity for Pitt faculty and students, bridging their research with the educational goals of the Year of Data and Society. They reported that they presented “our process of locating, requesting, and using publicly available data at the Pittsburgh Collaboratory for Water Research, Education, and Outreach’s ‘Water in a changing world’ lunch discussion series.”

- **Algorithmic Fairness in Practice: Judge Discretion and the Pennsylvania Sentence Risk Assessment Instrument:** This project is an example of the critical study of data and systems. Project team members Pitt Ph.D student Dasha Pruss and faculty member Colin Allen describe the aims of their work: “Recidivism risk assessment instruments, which estimate an individual’s risk of rearrest for a future crime, are often presented as a data-driven strategy for progressive judicial reform – a way of reducing racial bias in sentencing, abolishing cash bail, and reducing mass incarceration. This project sought to gather and analyze empirical evidence about the judicial impacts of a recently-implemented recidivism risk assessment instrument in Pennsylvania, the Sentence Risk Assessment Instrument. In particular, we sought to understand how the instrument’s recommendations interact with judge discretion, which is ultimately what affects the lives of criminal defendants.” This funded-research project has offered important findings to this critical area of study. The researchers share, “Contrary to claims that the Sentence Risk Assessment Instrument would have significant impacts on sentencing – beneficial or harmful – our qualitative results suggest that the Sentence Risk Assessment Instrument has had no impact on judicial practice.”

We are pleased that several project teams have reported that they secured additional internal funding or have plans to submit external grants to advance the arc of their work.

V. Recommendations and Conclusion

In the Year of Data and Society Steering Committee's final meeting, we considered and discussed institutional support that would advance the areas that were prioritized during the Year of Data and Society: community-partnered data science, socially responsible data education, and critical data studies at Pitt. Indeed, there is opportunity and interest for continued University facilitation and incentivization for such work. In final reports about their funded work, project teams noted:

- “We think that the Year of Data and Society team has done an excellent job encouraging social relevant data projects within the University. We would love to see Pitt continue to make more opportunities like these available.”

- “I feel there are a lot of people who are still learning the ways that a focus on data and a focus on society are mutually reinforcing, rather than mutually exclusive...I hope that the Year of Data and Society helps people…to recognize and value the work done at the intersection, and that as these projects become more legible to people in positions of

authority, the work will become more valued components of dossiers for tenure and promotion – primary projects, rather than side projects or overloads."

The Data Science Task Force was formed to answer the question "how should the Pitt academic community collectively act on the urgent need, given our context, strengths, and individual efforts in data-related areas?"[8] In their report, the Task Force members offer a compelling conceptual model, a layered representation of the data expertise at our University that is connected by a "coordination tower." The Steering Committee's recommendations for supporting work and generating community beyond the Year of Data and Society align with the Data Science Task Force's recommendations and model.

We recommend:

1. ***Visibility***: In alignment with the Data Science Task Force's request for a "coordination tower" that facilitates Data Science resources of all types at Pitt, we feel that a centralized resource on the Web is needed to coordinate and bring visibility to the data-for-good work happening across the University, whether in education, research, community engagement, or otherwise.
2. ***Staffing***: To create an effective "coordination tower," and to ensure and sustain this visibility, a skilled "connector" must be identified to maintain this resource as a promotable part of their position. This recommendation is in alignment with the Task Force's discussion of human and institutional resources.[9] A strategically skilled person needs to be tasked to integrate this resource into existing resources and have the capability to incentivize its use. The connector or connectors should have an understanding of computational methods / econometrics / statistics and/or approach data from a humanistic and egal perspective. Connectors should be versed in community engagement work and adroit in communications and in navigating administrative and curricular policies. The University may consider the appointment of existing Pitt faculty (current "data science liaisons" and champions) to this role with dedicated time and salary allocated to this coordination role.
3. ***Recognition***: We maintain that honoraria and honorific task titles can be used to recognize and make visible the work that existing data science champions and liaisons do to maintain interdisciplinary collaborations at Pitt. Small honoraria can be used to denote "Respect for Labor." The University of Pittsburgh may incentivize the development of new "data and society" curricula, programming, and resources by allowing for internal honoraria that do not require payment of fringe.[10]

[8] "Report of the Data Science Task Force," 4.
[9] "Report of the Data Science Task Force," 6.
[10] Steering Committee member and Pitt faculty member Lisa Parker advanced such a recommendation in a Research, Ethics and Society Initiative (RESI) proposal, offering a model that is applicable here: Allow for faculty and staff to "receive internal honoraria (not requiring payment of fringe) of, for example, up to $1250 annually for giving internal talks and up to $5000 per 5-year period for internal special projects (e.g., colloquia, course development, research). Such a model may set eligibility limits; a party might not

We are grateful for the University's engagement with the Year of Data and Society. Through this initiative, the University was able to support an inspiring collection of projects and host speakers who have offered unique perspectives on how data can contribute to individual well-being and the greater social good. As we look ahead to the Year of Emotional Well-Being at Pitt, we acknowledge the ways that data impacts the lives of individuals and our communities. Through our teaching and research, we encourage a continued commitment to using data in ways that benefit the well-being of our community members.

be eligible for another $5K project stipend/honorarium for a period of time, to be sure funding is spread and is not being used as a substitute for salary support."

Appendix A: Steering Committee Members

- Malihe Alikhani, Assistant Professor, School of Computing and Information
- Chad Burton, Data and Privacy Officer, Pitt IT
- Michael P. Colaresi, William S. Dietrich II Chair of Political Science and Research and Academic Director at the Institute for Cyber Law, Policy and Security
- Sharon Connor, Associate Professor, School of Pharmacy, and director of the Grace Lamsam Pharmacy Program for Underserved Populations
- Brennan Conway, Undergraduate Student, Pitt Student Government Board
- Beatrice Dias, Assistant Professor, School of Education
- Warren Fass, Associate Professor of Psychology, University of Pittsburgh at Bradford
- David Gau, Postdoctoral Scholar, University of Pittsburgh Postdoctoral Association
- Oliver Hinder, Assistant Professor, Swanson School of Engineering
- Mike Holland, Vice Chancellor for Science Policy and Research Strategies
- Kirk Holbrook, Director, Community Engagement Center in the Hill District
- Jeff Inman, Associate Dean for Research and Faculty and Albert Wesley Frey Chair in Marketing, Katz Graduate School of Business
- Tyrica Terry Kapral, Humanities Data Librarian, University Library System
- Young Ji Lee, Assistant Professor, School of Nursing
- Alison Langmead, Clinical Associate Professor and Director, Visual Media Workshop; Associate Professor, School of Information Sciences
- Sera Linardi, Associate Professor of Economics at the Graduate School of Public and International Affairs
- Mike Madison, Professor and John E. Murray Faculty Scholar, School of Law,
- Eleanor Mattern, Director of the Sara Fine Institute and Assistant Teaching Professor, School of Computing and Information (Committee Chair)
- Liz Monk, Community Engagement & Special Projects Manager, University Center for Social and Urban Research
- Dean Nelson, Associate Professor of Statistics, University of Pittsburgh at Greensburg
- Mary L. Ohmer, COSA Chair and Associate Professor, School of Social Work
- Lisa S. Parker, Dickie, McCamey & Chilcote Professor of Bioethics, Director of the Center for Bioethics & Health Law, and Professor of Human Genetics in the Graduate School of Public Health
- Melissa Ratajeski, Coordinator of Data Services, The Health Sciences Library System
- Andy Rhodes, CIO of UNICEF, Alumni Representative (SCI '87)
- Jane Thaler, Doctoral Candidate, School of Computing and Information
- Sera Thornton, Learning Scientist and Teaching Consultant, University Center for Teaching and Learning
- Valerie Watzlaf, Vice Chair of Education and Associate Professor, School of Health and Rehabilitation Sciences
- Steve Wisniewski, Vice Provost for Budget and Analytics
- Kim Wong, Associate Research Professor, Center for Research Computing

Appendix B: Table of Committee-Organized Programming

Note: In addition to these events, the Year of Data and Society Steering Committee hosted seven one-hour information sessions, attracting 95 registrants across them.

Date	Presenter(s)	Title	Description	Participation	Documentation
9/8/21	Dr. Sera Linardi and members of the Grief to Action team	Project 412Connect: Bridging Students and Underrepresented Communities	This session reported on the design of a data platform called 412Connect, which focuses on increasing online support for Pittsburgh Black-owned businesses from students in the greater university community.	Online: 11 attendees	Event Recording Event Web Story
9/21/21	Jonathan Schwabish & Alice Feng	Applying Racial Equity Awareness in Data Visualization	Just as we carefully consider our written words, we should be equally careful in how we visually present data to our readers, users, and audiences, including the words we use in and around those visuals. Taking a DEI perspective means considering how the specific lived experiences and perspectives of the people and communities we are studying, as well as our readers, will perceive information and carry that information forward. In this online talk, the presenters highlighted a variety of techniques that data visualization producers should consider when creating visuals with this DEI approach.	Online: 170 registrants 112 attendees	Event Recording
9/24/21	Facilitated by Nora Mattern	Social Justice and Tech Reading Group:	This discussion followed the presentation by Schwabish and Feng. Participants in this Sara Fine Institute - Research, Ethics and Society Initiative reading group	Online: 7 attendees	N/A

Date	Presenter(s)	Title	Description	Participation	Documentation
		Do No Harm Guide	meeting were invited to offer their reflections on the talk and discuss it further in this informal setting		
10/8/21	Andy Rhodes (SCI BSIS)	Advancing UNICEF's Mission Through Data	In this hybrid presentation, Andy spoke about how UNICEF USA uses data to inform and carry out its international mission of supporting children and defending their rights. He profiled examples of the use of data in UNICEF initiatives, including the UNICEF Child Friendly Cities Initiative, which supports municipal governments in realizing the rights of children at the local level, and UNICEF's COVID-19 response. Andy described the data that UNICEF collects and shares and where the Pitt community can access UNICEF open data.	Online and in Person: 40 registrants 21 attendees	Event Recording
10/21/21	Mimi Ọnụọha	The Hair in the Cable	What are the quiet ideas packed within our protocols, data centers, and cables? This talk focused on the patterns that show up in technological systems, the power imbalances those patterns point to, and the answers to be found in the spaces in between.	Online: 55 registrants 30 attendees	Event Recording Web Story
10/27/21	Lizzie O'Shea	A Usable Past for a Democratic Future: How Looking Backward Can Help Us Navigate the Digital Revolution	Co-hosted with Sara Fine Institute and the Research, Ethics and Society Initiative. Too often, technology is presented without context. It is treated as a natural phenomenon or a force of nature, inevitable and unstoppable. To make sense of our digital present, there is an instinctive sense that we need to imagine	Online: 116 registrants 55 attendees	Event Recording Web Story

Date	Presenter(s)	Title	Description	Participation	Documentation
			the future, and bend society around the path determined for us by tech. But making technology is a human activity, and the technological problems we face are human problems. An understanding of history, philosophy, sociology and the arts is invaluable to making sense of technological problems. This talk emphasized that if we want to reclaim the present as the cause of a different future, we don't just need coders and engineers, we need people from all different disciplines to collaborate and make the most of the potential of the digital revolution.		
11/5/21	Catherine D'Ignazio	Data Feminism	Illustrating data feminism in action, this talk showed how challenges to the male/female binary can help to challenge other hierarchical (and empirically wrong) classification systems; it explained how an understanding of emotion can expand our ideas about effective data visualization; how the concept of invisible labor can expose the significant human efforts required by our automated systems; and why the data never, ever "speak for themselves." The goal of this talk, as with the project of data feminism, was to model how scholarship can be transformed into action: how feminist thinking can be operationalized in order to imagine more ethical and equitable data practices.	Online: 136 registrants 77 attendees	Event Recording Web Story *University Times* Story

Date	Presenter(s)	Title	Description	Participation	Documentation
11/9/21 and 11/16/21	Facilitated by Pitt Data Jam mentors	Getting Started with Data: A Two-Part Data Analysis Workshop for Students	This two-part, student-led virtual workshop introduced students to sources of data and some basics of data analysis. Participants were welcome to join one or both of the events.	Online: 12 attendees (Part 1); 15 attendees (Part 2)	N/A
11/19/21	Sera Linardi and CAASI Grief to Action team	CAASI Allegheny County Policing Project	This talk discussed how the Grief to Action initiative at the Center for Analytical Approaches to Social Innovation (CAASI) spent the year after the summer of 2020 building a data platform to navigate hyperfragmentation of policing in Allegheny County. Led by GSPIA & SCI students, our volunteer team created a platform with a searchable library of almost 100 police contracts, an interactive map of Allegheny County police departments, and a guide to help citizens navigate the complexity of filing misconduct complaints.	Online: 91 registrants 66 attendees	Event Recording
1/20/22	Liz Monk and Nora Mattern	Finding Stories in Data (Year of Data and Society - Center for Creativity Event)	This workshop focused on building confidence “reading” datasets to uncover the stories they contain. We honed the ability to find stories in data as a step toward producing data visualizations or narratives, or simply become a more critical consumer of data.	Online: 10 attendees	N/A
1/8/22 - 3/27/2022	Facilitated by Dr. Kostas Pelechrinis	Oscars Prediction Game	In this asynchronous and flexible activity, students had the opportunity to learn data analytics skills through a series of short videos and apply their skills to predict this	Online: 11 participants	Webpage with Recordings

Date	Presenter(s)	Title	Description	Participation	Documentation
			year's Academy Award winners. We supported this learning experience through a Slack site where students could pose questions about the videos and their work to develop predictions.		
1/28/22	Mark McKillop	Census, Data, and the Reapportionment Process in Pennsylvania	Redistricting is the process by which the boundaries of elective districts are periodically redrawn to align representation with population. In this session, Mark McKillop described how Census data and other data sources are used in the reapportionment (redistribution of seats) process at both the state and federal level of government.	Online: 23 registrants 11 attendees	Web Story
2/10/22	Sharon Leon	From Scholar to System to Scale: Generating Meso-level Historical Data to Recover the Lived Experiences of Enslaved People	Presented by the Bernadette Callery Archives Lecture Series and the Sara Fine Institute of the Pitt School of Computing and Information This talk traced Sharon Leon's interconnected research agenda through three distinct but related projects: 1) an individual project focused on enslaved people in Maryland: Life and Labor Under Slavery: the Jesuit Plantation Project; 2) a collaborative effort to develop and test a linked data ontology to represent the experiences of the enslaved people who labored for educational institutions in the US: On These Grounds: Slavery and the University; and 3) a linked data driven web publishing platform: Omeka S. In reflecting on these projects, Leon explored the ways that this work contributes both to slavery studies and to	Online: 75 registrants 36 attendees In-person 78 registrants ~35 attendees	Web Story

Date	Presenter(s)	Title	Description	Participation	Documentation
			critical archival studies, and how it offers a potential model for future interdisciplinary collaborations.		
2/17/22	Liz Monk and Chelsea Gunn	Art + Data	This workshop explored the connection between art and the creative side of visualizing data. We share data art inspiration, local data resources, and spent time to getting creative making our own art using data.	In-person: 4 attendees	N/A
4/1/22	Kelsey Cowles	Citizen Science: Transforming Scientific Research Through Public Participation	This talk introduced participants to citizen science and its tenets and shared a wide variety of exciting projects involving data and citizen science work. Participants were equipped with the tools needed to discover other opportunities of interest to them.	Online: 10 registrants 6 attendees	N/A
4/8/22	Year of Data and Society Funding Recipients	Celebration of the Year of Data and Society	This hybrid event spotlighted faculty, student, and staff projects awarded through the Year of Data and Society. The event included a panel on facilitating learning about data, a panel on sustaining the impact of project activities, lightning talks, and a poster session.	In-person: 65 registrants ~60 attendees Online: 49 registrants 31 attendees	Event Recordings: Panel on Teaching and Learning Lightning Talks Panel on Sustaining Impact Web Story
4/14/22	Dr. Lucy Suchman, Professor Emerita of the	Data In/securities: Automating intelligence in the	The current revival of artificial intelligence (AI) includes an upsurge of investment in automating military intelligence on the part of the US Department of Defense. A	Online: 40 registrants 20 attendees	N/A

Date	Presenter(s)	Title	Description	Participation	Documentation
	Anthropology of Science and Technology at Lancaster University in the UK	U.S. Department of Defense	series of programs within the various branches of the US military share a technopolitical imaginary of fully integrated, comprehensive and real-time 'situational awareness' across US theaters of operation. Much less attention is paid, however, to fundamental questions regarding translations from signals and images to understanding and response. This talk will foreground those questions and through them question the premises of trust in data that underwrite the military imaginary. This event was sponsored by PittCyber and hosted by the Writing Institute and Sara Fine Institute at the University of Pittsburgh.		
4/19/22	Elizabeth England (SCI MLIS)	Digital Preservation at the National Archives and Records Administration	The National Archives and Records Administration (NARA) currently holds more than 2 billion electronic records, with ever-increasingly rapid growth as the U.S. Government transitions to all-electronic recordkeeping. With a commitment to preserving and maintaining access to the content of these records in perpetuity, NARA's approach to digital preservation must be holistic and scalable. In this talk, Elizabeth England (MLIS '16), Digital Preservation Specialist at NARA, discussed how NARA's digital preservation program is structured and current digital preservation activities for preservation planning and risk mitigation at a large-scale.	Online: 19 attendees	N/A

Appendix C: Funded Projects

First Round Funded Projects

Cultivating Critical Data Literacies for Teaching and Learning Through Praxis
Veena Vasudevan (School of Education), Tinukwa Boulder (School of Education)
Through a lecture series and curriculum development, this project will build critical data literacies, or the ability to deconstruct digital data and understand how data gets collected, interpreted, represented, storied, and marketed. The team will invite scholars who work at the intersection of data, technology, society, and equity to give virtual talks that will be widely accessible to students and faculty and recorded for longer-term use. As a follow-up to these events, the team will build openly available modules on critical data literacies that connect the lectures with materials like listening guides, learning activities, and a reading list.

Data and Information Equity in Homewood
Elise Silva (English Department), Khirsten L. Scott, Ph.D. (English Department, Founder of HYPE Media)
This project brings together HYPE (Homewood Youth Power Engaged) Media, the Community Engagement Center in Homewood, and scholars and community members who are engaged in social work, Black rhetorics, information science, community-engaged learning, Wikipedia, and radical knowledge equity. The project aims to provide community workshops and opportunities for youth to compose and revise narratives about the Homewood neighborhood. The project addresses neighborhood histories and perceptions by engaging youth in critical analysis of existing narratives about their neighborhood, teaching them how to use data, information, and digital media to advance their own counter-narratives.

Developing a Data Science for Social Justice Curriculum at Pitt
Sera Linardi (GSPIA), Robert Gradeck (University Center for Social and Urban Research), Ron Idoko (Office for Equity, Diversity, and Inclusion), Brett Say (Pitt Honors College)
The project will develop curricular materials to equip students passionate about social justice issues to work with public interest technologies and civic data. The partners on this grant, the Center for Analytical Approaches for Social Innovation (CAASI), Western Pennsylvania Regional Data Center (WPRDC), University Honors College (UHC) and the Office of Diversity, Equity and Inclusion (DEI), will draw on their experience in advising and supporting student-led projects and conducting independent research to develop, deliver and refine curricular materials. These materials will prepare students to understand and account for community dynamics in their work, develop socially-responsible research and data practices, discern the opportunities and challenges that can come from working with technology and civic data, and implement projects that hold benefits for both community partners and students.

Enriching Citizen-Science Data Using Context, Feedback, and Community-Oriented Communication

Abhishek Viswanathan (School of Computing and Information), Amy Babay (School of Computing and Information), Rosta Farzan (School of Computing and Information)
This project builds on research that has involved citizen scientists in the Pittsburgh region in air quality data collection. Through the Year of Data and Society award, the project team will engage citizen scientists in data analysis to foster increased understanding of the air quality data and how it can be understood to advocate for change. The team will host a series of data analysis, data visualization, and data storytelling workshops to empower members of the community to find alternative ways to make sense of environmental data using freely available tools and art-based approaches.

Exploring the Churchill Valley Greenway Through Visual and Scientific Data Collection
Sarah Moore (Dietrich School of Arts and Sciences, Film and Media Studies Department), Patrick Shirey (Dietrich School of Arts and Sciences, Department of Geology and Environmental Science)
This project focuses on the 150-acre Churchill Valley Greenway and the human impact on this land, the Chalfant Run, and its tributaries. This project will involve students and community members in the collection of data of the greenway's plant species as well as the Chalfant Run tributaries and fish populations. Videos will be made of every plant species, creating a visual database that can be used for identification and storytelling purposes. A film and storytelling team will use this data to visually tell the story of the greenway's ecosystem and the human impact on the place. Through film, the team will show the way the water conditions are changing, track the movement and growth of fish populations, and promote the succession of the plant species.

Forbes Hacks
Hayden Feddock (Undergraduate; Forbes Hall Engineering LLC), Samil Paul (Undergraduate; Forbes Hall Engineering LLC)
On November 13th, the Forbes Hall Resident Assistants (RAs) will host the Forbes Hall Signature Program, Forbes Hacks, and the Year of Data and Society award will support this event. Forbes Hacks is a hackathon that challenges and expands student and faculty perspectives, specifically attuning the engineering community to the ideas enclosed in the Year of Data & Society mission. The design competition hosts recognize that it is crucial that the University's aspiring engineers realize the integral -- and often invasive -- role that data plays in our lives and in the technologies we use and design. The Forbes Hacks event will charge these engineers to ideate and reflect on how to drive the collection and use of data in a manner that is ethical and exhibits an intrinsic respect for privacy, transparency, and diversity.

Infusing Data Science into the Health Humanities and the Humanities into the Data Sciences: Ethical Use, Social Implications, and Educational Impact
Michael Deem (Public Health/Human Genetics), Stephanie Eckstrom (Master's of Social Work Program, Pitt-Bradford), Bridget Keown (Gender, Sexuality, and Women's Studies Program), Jane Liebschutz (Department of Medicine), Kathy Mayle (Community College of Allegheny County), Jonathan Perlman (Palliative and Supportive Institute), Susan Wieczorek (Department of Communication, Pitt- Johnstown)

This award will support several virtual and in-person events featuring speakers who are applying data-informed research to the health humanities, advancing narrative as data in health research and policy, and exploring the ethics and social implications of technologies. The project team will convene a two-year seminar of faculty, trainees, and both graduate and undergraduate students to engage in a critical analysis of the issues raised by the speakers.

Latinx Data: Historical Civil Rights Advocacy and Contemporary Intersectional Insights
Lisa Ortiz (School of Education), Gina Garcia (School of Education), Michele Reid-Vazquez (Department of Africana Studies), Ron Idoko (Office for Equity, Diversity, and Inclusion)
This award supported an October 15 panel session featuring Michael Rodríguez-Muñiz, author of Figures of the Future: Latino Civil Rights and the Politics of Demographic Change (Princeton University Press, 2021) and Amalia Z. Daché, lead editor of Rise Up! Activism as Education (Michigan State University Press, 2019). Moderated by Lisa Ortiz (School of Education), the discussion explored the complexities of data and the Latinx community, the contemporary challenges regarding inequitable Latinx data representation, and the ways the Latinx community has created and used data as advocacy." This event was part of LatinxConnect 2021, a virtual conference that provided a space for dialogue about Latinx identities, cultures, and contemporary issues.

Responsible Use of Learning Analytics: Challenges and Opportunities
Marcia Rapchak (School of Computing and Information), Amanda Brodish (Office of the Provost), Robert Ackerman (Center for Teaching and Learning), John Radzilowicz (Center for Teaching and Learning)
This project explores the implications of how data used in learning analytics can impact the experience of students and instructors. Through a series of workshops with invited speakers and for staff, faculty, students, and an open audience, the project team will encourage socially responsible use of data by inspiring conversation about the data provided via learning technology systems like Canvas and how to combat bias and follow ethical practices in using learning analytics.

Understanding Data, Digital Culture, and Disinformation: Community Outreach to Bolster Media Literacy and Democratic Resilience in the Monongahela River Valley
Jessica Ghilani (Pitt Greensburg/Pitt Disinformation Lab), Lara Putnam (History/Pitt Disinformation Lab)
In collaboration with the Pitt Disinformation Lab, this effort will pilot a community-driven public outreach program, with the potential to scale (dis)information literacy work. The effort will identify and train high-profile, involved, and influential members of small-town communities to recognize and moderate disinformation while also teaching others about how to spot it. This has the potential to be transformative to digital community spaces, which have become an increasing source of news and information for SWPA communities in the absence of local media.

Second Round Funded Projects

Addressing Water Affordability and Governance Transparency in the Pittsburgh Region with Publicly Available Data

Marcela González Rivas (GSPIA), Caitlin Shroering (Pittsburgh Collaboratory for Water Outreach, Research, and Education, University of Pittsburgh Water Collaboratory)

This project will build an understanding of the elements and characteristics of "good" water governance. The research team will conduct interviews with key actors in the water sector, gathering data about how water activists, officials, industry representatives and researchers characterize good water governance. This data will complement insights gained through a detailed review of academic, human rights, and advocacy literature on water governance. In collaboration with Women for a Healthy Environment, the project team will produce "report cards" of the region's water authorities and create distilled information about water governance that can be disseminated to community organizations. The program team will also share their findings of the interview data collection and their process of locating, requesting, and using publicly available data for water research at the Water Collaboratory's "Water in a Changing World" lunch discussion series at Pitt.

Black Voices in Computing

Rosta Farzan, Janet Majekodunmi, Shailey P Gulrajani, Chelsea Morning Gunn, and Dmitriy Babichenko (School of Computing and Information)

The goal of this project is to address the important challenge of race, inequalities, and injustices in computing by developing an exhibit that highlights the voice of Black scholars in computing. Through a novel lens of an interactive exhibit, the project aims to address the challenge of race and injustices in the field of computing by (1) systematically collect data and document knowledge about Black scholars in the computing; (2) bringing attention to the significance of the contribution of the Black scholars in the field; (3) creating a public space to visibly communicate the importance of diversity to our community, and particularly to the under-represented members of our community; (4) by engaging undergraduate students from the underrepresented group in this research project, we aim to empower them in being influential members of the community, encourage them to pursue research and higher education in the field of computing.

Careers in Language Data: How to prepare our language students for the data-focused job future

Na-Rae Han and Dan Villarreal (Department of Linguistics)

This award will support a symposium titled "Careers in Language Data: How to prepare our language students for the data-focused job future." Through this event, attendees will learn about the roles that language experts are increasingly playing in the technology industry. The event will present concrete paths for language majors and language departments in their pursuit of getting graduates ready for careers in the language data industry. Through the symposium, students and faculty will understand the data skills needed for this career preparation and provide a space for discussion about how curriculum and advising can support these data skills.

Complementing the Engineering Curriculum with Data for Social Good

Amin Rahimian (Swanson School of Engineering)

This project will support the development of instructional materials that will be delivered as an Engineering elective entitled “Data for Social Good”. The curriculum will engage students in a critical study of contemporary topics at the intersection of AI, data, and society including fairness, accountability, transparency, and privacy issues. Engineers broadly, and industrial engineers in particular, are often in positions to shape society through their designs. The curriculum will equip students with tools to think through the societal consequences of their designs and empower them to influence large-scale sociotechnical systems of the future. THe instructional materials will also be made available in an open repository for adaptation and adoption by other instructors within and outside of Engineering.

Curriculum for Introduction to Data Literacy for All Through Applications

Konstantinos Pelechrinis and Prashant Krishnamurthy (School of Computing and Information)

This project will produce an introductory data science curriculum that will be openly available and adaptable for integration in courses across the University. The curriculum will use engaging applications and fields, like movies, music, transportation, and sports, to build understandings of probability, uncertainty, causality, correlation, seasonality, and data-driven decision making. This curriculum development project will produce short modules that will introduce various data science/literacy concepts, with minimal to no pre-requisites. These modules will be available asynchronously online to the whole Pitt community. The team will also hold workshops throughout using a flipped classroom setting, where students that have watched the modules will come in and present/discuss/ask questions about the modules using their own application from their field of interest.

Data Journalism and Media Literacy Panel Discussion

Jamaica Jones, Emily Keith, Shalani Dilinika Jayamanne Mohottige, Sneha Vaidhyam (School of Computing and Information)

This award supports a panel discussion and reading group focused on the role of data across media and journalism ecosystems. The events will engage participants of all backgrounds in a generative exchange about misinformation, the role of the media as information gatekeepers, and the use of data as both a tool and a weapon in the age of online misinformation. The panel discussion and reading group will foster data literacy skills, encouraging participants to critically evaluate the data that we consume through online information environments.

DHRX Residency Program Seed Grant

Alison Langmead (Department of History of Art and Architecture and School of Computing and Information), Kate Joranson (University Library System), Chelsea Gunn (School of Computing and Information), and Annette Vee (Department of English)

The DHRX Residency Program Seed Grant project will design and instantiate a series of ongoing residencies that will serve as a structured opportunity to grow the offerings of the DHRX: Digital Humanities Research initiative and to increase university-wide understanding of, and engagement with, the role of computing and data in the interpretive disciplines. The funds

will support planning sessions, facilitated by members of the Pitt community, resulting in a design document for the DHRX Residency Program. The project planning team will share plans for the DHRX Residency Program with a wider public in late Spring 2022, with an outward-facing colloquium hosted by the Humanities Center.

My Nature Outing

Stephen Quigley (Department of English), Cassie Quigley (School of Education), Hillary Henry (School of Education), and Holly Plank (School of Education)

My Nature Outing provides middle and high school students an ingress into environmental education and computer science. The program encourages students to first embed in nature while completing several multimodal documentation and data collection activities. During these activities, students test the affordances and constraints of different media for data collection, including photography, sound recording, and journaling. After a morning spent in the woods collecting data, students return to a classroom space where they work with code to develop a webtext that circulates their findings. The Year of Data and Society award will provide My Nature Outing with the tools and resources to support outings at eight different locations around Pittsburgh.

Open Scholarship and Research Impact Challenge

Helenmary Sheridan (Health Sciences Library System), Ryan Champagne (Office of Sponsored Programs), Dominic Bordelon (University Library System)

Open scholarship refers to the philosophy and practice of improving the reproducibility and rigor of research by sharing data, code, protocols, and results. The Open Scholarship and Research Impact Challenge will comprise a two-week calendar of events focused on giving researchers practical tools to make their research more accessible, more reproducible, more connected to the public welfare, and more in line with their personal values. Run by the Health Sciences Library System, the University Library System, and the Office of Sponsored Programs, this activity will result in the creation of readily available curriculum and teaching materials that can be reused in future programs and shared publicly for use at other institutions. It will serve as a new model for making an explicit connection between open scholarship and critical scholarly impact learning and practice.

PittPharmacy Global Health Day

Jennifer Chai (School of Pharmacy)

This award supports the PittPharmacy Global Health Day for students, faculty, and staff to promote awareness of how data, particularly in a global context, permeates our educational, governmental, health care systems, and other aspects of society. Through a keynote presentation and an interactive activity, the participants will be invited to think critically about the impact of data in global health (and global health pharmacy specifically) and encouraged to seek innovative, ethical and compassionate solutions to priority areas in global health.

Promoting Data Equality by Improving Open Government Data Users' Data Literacy

Fanghui Xiao (School of Computing and Information), Daqing He (School of Computing and Information), and David Walker (University Center for Social and Urban Research)
Governments at all levels are sharing data about our communities through open government data (OGD) portals. However, not all members of the public have the data literacy skills that would support their use of this data, resulting in “data inequality.” Through user studies, this project will establish a comprehensive OGD literacy framework that will be used to facilitate data literacy workshop design and will inform the improvement of the interface design of data portal platforms to encourage more users to use OGD. The study will also provide a deliverable interactive OGD-literacy test tool for evaluating users' OGD-literacy. The ultimate goal of this project is to promote data equality.

Reclaiming Narratives Through Interdisciplinary Data Collection
Bridget Keown and Julie Beaulieu (Gender, Sexuality, and Women's Studies Program)
The Gender and Science Initiative, part of the Gender, Sexuality, and Women's Studies Program, is dedicated to educating students across all disciplines about equitable data collection and research practices, and to recovering narratives that have been lost to the historic record and gone under-considered in health, environmental, and social sciences. This project will be used to support speakers whose work exemplifies such liberatory work. Additionally, it will support programming that will welcome faculty and students from across the University to discuss and develop revolutionary research practices that challenge disciplinary boundaries and highlight overlooked individuals and groups in the past and present.

Super Analytics Challenge Focused on Food Security and Hunger
Christopher Barlow and Sandra Douglas (Katz Graduate School of Business)
The award will provide support to the 2022 Super Analytics Challenge, hosted by the Joseph M. Katz Graduate School of Business. This event connects Pitt students with partners in local nonprofits, government, and business and provides a challenge to explore through data analytics. This year, the Super Analytics Challenge will use data to build an understanding of food insecurity and hunger in our region. The participants will share insights learned through the Challenge with the Pittsburgh Food Bank.

Understanding Civic Resilience in Homewood and Surrounding Neighborhoods
Daren Ellerbee (Community Engagement Center in Homewood), Beth Schwanke (Pitt Cyber), Rachel Rubin (University Library System), Lara Putnam (Department of History)
This project will develop a nuanced understanding of racialized information contexts and how disinformation differentially affects communities of color, providing novel and significant data on the observed prevalence of disinformation and its effects. The project team will create an understanding of the value of digital civic spaces and how to build resilience to disinformation into them through a co-creation model. Together with community members, the team will build the Homewood Digital Civic Asset Map, which will provide in-depth data and analysis of the wealth of digital spaces used by residents, many of which are neglected by existing research. The map and analysis will help residents, neighborhood organizations, researchers, and others identify: (1) healthy digital civic spaces; (2) digital civic spaces where resiliency might be

improved; (3) elements that create healthy digital civic spaces. Through this community-partnered work, the award recipients anticipate an improved understanding of the information/disinformation ecosystem that is actionable and useful to residents, researchers, and policy-makers.

Third Round Funded Projects

Algorithmic Fairness in Practice: Judge Discretion and the Pennsylvania Sentence Risk Assessment Instrument
Colin Allen and Dasha Pruss (History and Philosophy of Science)
Evidence-based sentencing, a movement which advocates for grounding sentencing decisions in empirical data, often presents recidivism risk assessment algorithms as a strategy for remediating racial biases in the criminal legal system. However, there is growing concern about the potential harms of risk assessment. In this research project, the project team will conduct a quantitative and qualitative analysis of the impacts of the Pennsylvania Sentence Risk Assessment tool, which was deployed in state courts in July 2020 and is one of a handful of instruments in the country to incorporate recidivism risk in statewide sentencing decisions. In particular, the team aims to understand how algorithmic recommendations interact with judge discretion, which is ultimately what affects the lives of criminal defendants and should inform how risk assessment tools are validated.

Data@PITT
Robin Leaf (School of Health and Rehabilitation Sciences)
The Data@Pitt event will support Pitt staff members interested in learning more about available data analytics tools and datasets at Pitt.. This event aligns with the Year of Data and Society as it will provide a space to support learning about technologies, tools, and opportunities that involve data. Most importantly, this event would provide stories and real-life examples of data usage to all staff members within the Pitt community. The groups encouraged to attend will be staff with limited access or experience with data analytics tools and faculty who hold administrative roles. This event ideally would serve as the 'kick-off' to a user group (or multiple groups) at Pitt that will connect data scientists and analysts with staff in other roles who have day-to-day contact with data.

Making Training of Undergraduate Students to be DataJam Mentors More Equitably Available for Students in Under-Served and Under-Resourced Areas
Judy Cameron (Department of Psychiatry), Bryan Nelson (Department of Statistics), Rachel Aiyeko (Duquesne University), Shailendra Gajanan (Pitt-Bradford, Division of Management and Education)
The DataJam is a year-long data science competition for high school students to introduce, encourage, and engage young people in data science. Trained undergraduate students, who serve as DataJam mentors, are critical to the success of the program and are currently drawn from the University of Pittsburgh Oakland campus. This project will expand the reach of the DataJam mentor training to Pitt-Bradford and Duquesne University and to students interested in

careers in secondary education. In addition, the project will broaden the DataJam mentor course to incorporate evidence-based and culturally-informed pedagogical strategies. Through the expanded mentorship program, the project team will be supported in their goals to offer the DataJam program to students in more high schools.

The Politics of Power and Place: Giving Voice Through Curated Digital Storytelling
Jennifer Keating (Department of English)
The *Power of Politics and Place: Giving Voice Through Curated Digital Storytelling* is a making process that will allow students to partner with community organizations, artists and writers to co-make digital stories. This co-making process can allow an organization to succinctly link digital storytelling to their mission and evolving relationship with the community that they serve, as they harness place-based politics and culture to build meaningful relationships through communication. This project recognizes narrative as data. As the student and faculty team collaborates with organizations to share a compelling or otherwise silenced or invisible story, students can learn the power of linking a digital story to a specific place and to the specific work of the partner organization.

Redressing Whiteness in a Crowdsourced Space: Networks of Support in Writing Studies
Benjamin Miller (Department of English)
Launched in 2012, the Writing Studies Tree is an open-access, crowdsourced database of academic genealogies in composition, rhetoric, and related fields. This project will redress racial and ethnic data gaps present in the database and improve the project's participatory architecture, so as to become more inclusive in the future. Through a series of initiatives, including a workshop, focus group, data transcribe-a-thon, and updates to the database, the Writing Studies Tree will receive a large and lasting course correction, sustainably filling in areas of the disciplinary network that had previously been missing.

SCREENSHOT: Silent Asia Online Annotation Tool for Teaching and Research
Kirsten A. Strayer (University Center for International Studies and Asian Studies Center)
This project will create and support an online space for students and scholars to experiment with and incorporate data analysis into close reading of film. The project seeks to make data analysis accessible, credible, and useful for film scholarship at large, as well as connect data annotation to the undergraduate film classroom. The project team will install and pilot an annotation tool for film (Mediate), supporting Pitt students as they build data analysis skills through their coursework. In addition, the team will engage the Pittsburgh silent film association, introducing its members to the tool for annotation and analysis.

Understanding Bias in Big Data and Artificial Intelligence for Health Care Through an Educational Health Informatics Hackathon
Yanshan Wang (Department of Health Information Management)
This project will support the first annual Health Informatics Hackathon, an event open to all Pitt faculty and students. This event will support faculty and students in understanding data-driven, algorithmic, and human bias in big data and AI in health sciences by exploring real-world health data and by implementing and testing AI algorithms in a 4-hour practical hackathon.

Competition Details

Year of Data and Society Funding Opportunity

Dates

Internal Submission Deadline: Tuesday, February 1, 2022

Details

Administrator(s): Year of Initiative (Owner)
Category: Internal Funding Opportunities
Cycle: Ongoing

Description

The Year of Data and Society provides the University of Pittsburgh an opportunity to think critically about the data we collect, use, and leave behind as traces, through our scholarly work, institutional operations, and our digital lives. Through the Year of Data and Society, we will celebrate existing expertise and practices at Pitt in data methods and data studies, increase our awareness of what socially responsible data practices look like in all domains, and develop strategies for areas where we can improve and grow at Pitt.

As part of this focus on data and its impacts on our lives and communities, the Year of Data and Society Steering Committee invites University of Pittsburgh students, staff, and faculty to submit applications to support activities connected to the theme. Applications for up to $8,000 to support new programs, events, curriculum development (either to teach about data and society or to use data in augmenting learning), research, art and creative works, technology design and development, and other possibilities are invited. All proposals should indicate how applicants will contribute to fostering socially responsible data practices at Pitt; to exploring societal implications of data and its uses; or to engaging the Pitt or broader community with data through curriculum development, teaching, events, art, or storytelling. Proposals for research or scholarly projects with budgets exceeding $8,000 are encouraged to apply to the Pitt Momentum Funds call.

February 1, 2022 is the third of three deadlines for proposals for the 2021-2022 academic year. The October 1 and December 1 deadlines are past.

The committee will accept proposals through February 1 and will provide decisions by February 15.

While matching is not required, projects with matching funds or in-kind contributions will be given priority. For best consideration, proposals should indicate how applicants would match the grant through funds, materials, equipment, space, time, or other contributions commensurate with or greater than the amount requested.

Please submit your application via Competition Space. You will also need to download theYear of Data and Society Budget Template and upload your completed version in your application in Competition Space.

You may find additional useful information in the list offrequently asked questions (FAQs) on the Year of Data and Society website.

We seek proposals in the following areas:

Events and programming: Host lectures, workshops, reading groups, panels, and community conversations around the theme of data and society. Potential topics include:

Social responsibility and data methods

Exploration of the impacts of data and its uses

Mitigating and redressing harm in data work and using data for good

Understanding and accounting for the social relationships, biases, and power dynamics behind data practices

Curriculum: Support/expand the data-focused curriculum at the University of Pittsburgh

Create instructional materials aimed at either formal undergraduate or graduate education or professional education for our faculty, staff, and postdocs, including syllabi, modules, or learning activities that build data concepts and skills in the context of a domain

Integrate best data practices for assessing your course and/or learning outcomes

Contribute to a central Pitt Canvas repository of shared curricular materials to support adoption and adaptation by instructors, including those in other programs

Include learning objectives that emphasize critical data literacy skills, social responsibility, and societal impact of data.

Teaching: Use data and data analysis methods to improve teaching and learning at the University of Pittsburgh

Use data, student-generated or otherwise, to inform and improve your course design and/or teaching practices

Assess your course and/or learning outcomes – what change in your course, student experience, and/or learning outcomes can you measure upon implementing this data-based intervention?

Plan to share with your peers what you have learned about the process of using data to improve your teaching

Research: Generate new knowledge and understanding. Potential topics include:

Use data to address challenging societal and community issues

Contribute to data studies scholarship, studying the societal, cultural, policy, and ethical aspects of data and data infrastructures systems

Engage in community-centered research on uses of data in society

Add a quantitative component to previously qualitative research related to society

Visual art and creative writing

Connect communities to data by using data to tell stories, visualize patterns, and as an art form

Technology design and development

Proof of concept or design of tools, methods, and workflows that uses data to promote well-being and community welfare

Proposal Review

All proposals must demonstrate:

Alignment with Year of Data and Society theme

Applicants must address how their project will foster socially responsible data practices at Pitt; explore the societal implications of data and its uses; use data to improve a societal experience or our knowledge about society and/or engage communities with data using art, events, and storytelling

- **Evidence of need, challenge, and/or opportunity and benefit**

  Applicants must provide a justification for the project, sharing the need, opportunity, or challenge that

it will address. The proposal should clearly define the target group that will be impacted by your project.

A commitment to DEI values, such as through:

A critical interrogation of the project's data collection, analysis, and reporting

A commitment to equitable and inclusive access through open licensing and sharing

The development of culturally responsive, anti-racist, and accessible data curricula

Events and projects that consider the use of data to address systemic inequalities and community well-being [or that explore where systemic inequalities have been furthered by data use]

Sustainable impact beyond Year of Data and Society by:

Strategically connecting to existing programs or infrastructure

Sharing of knowledge or products with peers to extend impact

Supporting long lasting changes (curricular changes in a program, policy, organizational, or structural changes)

Generating new knowledge/understanding

Priority will be given to proposals that provide matching funds or in-kind contributions. Projects also including one or more of the following are especially encouraged:

Are focused on teaching, curriculum development, or out of the classroom educational opportunities such as workshops

Involve interdisciplinary teams that bring together more than one department at Pitt

Involve team members with different roles at and connections to Pitt (student, staff, faculty, community members, alumni)

Connect the University of Pittsburgh campuses

Reporting and Participation Expectations for Award Recipients:
Award recipients will be asked to submit a brief report to yearof@pitt.edu by May 30, 2022. Award recipients will also be encouraged to share their activities at the Celebration of the Year of Data and Society in April 2022 and through Canvas or D-Scholarship@Pitt, as described below.

Report: Please submit a brief (~750-1000 words) summary of your project activities and reflection by May 30, 2022. Your report will be made available through the Year of Data and Society website and should address the following:

What was the need, challenge, or opportunity that your project addressed?

Briefly describe the main activities of your project (who, what, when, where…). If you hosted an event, please let us know the attendance (and share photographs if you have them!).What were some successes or things that went well for you in this project? Challenges or barriers?

What has this project positioned you take on next? Or what is a next step that you may be interested in pursuing?

What can others learn from your project and/or its outcomes? How can others improve their own practices based on your findings? Or, what were some of the main take-home messages from your event?

2. **Sharing**: Please submit your instructional materials for inclusion in a central Pitt repository of data curricula and educational resources. In doing so, your materials will be shared with the Pitt community.

For awardees creating other outputs, such as posters, papers, and datasets, we invite you to make your work available through the D-Scholarship@Pitt institutional repository.

Participation in the Celebration of the Year of Data and Society (April event): In April 2022, we will celebrate your Year of Data and Society activities at an event for the University. This event will also include a closing speaker. You will be invited to attend the event and represent your project in a way that best suits it (a poster, lightning talk, demonstration, or table). Award recipients will be contacted in March 2022 for information about ways to participate.

Kickoff data and society conversation zeroes in on connecting Black-owned businesses, students

By Briana Wipf

It started with a problem.

Members of the Center for Analytical Approaches to Social Innovation (CAASI), a group that seeks to use social science research to solve real-world issues, were aware that Pittsburgh is extremely segregated by race.

After the death of George Floyd in May 2020 and the ensuing social concern about racial equality and appropriate policing, CAASI, the group started by Dr. Sera Linardi, decided to put its energy toward supporting efforts to fight systemic racism.

One of the products of that energy is 412Connect, a web platform that seeks to connect University of Pittsburgh students with eight local Black-owned businesses (BOB).

On Wednesday, Sept. 8, Linardi, a professor of economics and director of CAASI, and some of her colleagues presented the process of building and launching 412Connect. The meeting, held on Zoom, was the first in the University of Pittsburgh's Year of Data and Society Conversations, a series that features speakers whose work with data can foster conversation around the societal, ethical and political implications of data.

Pitt's Year of Data and Society is the latest "year of" initiative from the Office of the Provost, and it serves as a theme that can unite various students and disciplines. This year's theme will look at ways data can be harnessed and the ethical implications of doing so.

412Connect uses a specific strategy to help solve problems.

"I'm going to focus a lot on how," Linardi said during the meeting.

Lindardi and her group knew they first had to survey BOBs to find out what they needed. The survey showed that the businesses wanted to increase their web and social media following and cultivate stronger relationships with college students in Oakland.

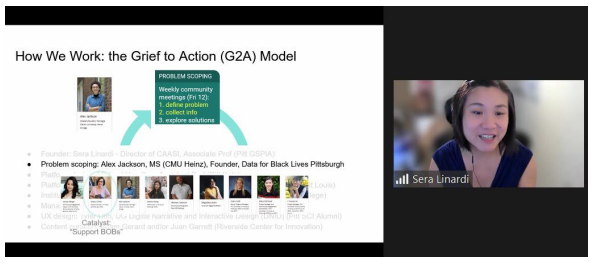
On the other side of the equation, students who were surveyed said they wanted to support BOBs but were unsure how to identify a BOB and limited by lack of buying power and geographic distance – this is where that historic segregation comes in.

The result is www.412connect.org, a platform that allows students to make an account and then take part in a digital scavenger hunt. The student participant is asked questions about one of the eight participating BOBs and must go to the BOBs' websites to get the answers. Answering questions correctly helps the student earn virtual badges and outside the classroom credits (OCC).

Students at the Pitt Honors College are required to earn OCC credits, which helps 412Connect reach its target demographic, said Ivy Chang, an undergraduate finance and economics student and the group's communication coordinator.

Through the work mostly of volunteers, along with a few paid positions and community partners, 412Connect came into being with the principles of ethical data use in play.

For one, the group wanted to provide equal support to the participating businesses on the platform, according to Alex DiChristofano, a data science PhD student at Washington University of St. Louis. While still using an algorithm to determine how to show the businesses to users, the platform respects the user's preferred business type.



412Connect

Dr. Sera Linardi discusses the Grief to Action model, which the CAASI team followed to develop 412Connect during the Zoom event Year of Data and Society Conversations: Project 412Connect: Bridging Students and Underrepresented Communities, held Wednesday, Sept. 8.

The web application itself was programmed using Python, Django, and SQLite. The data that is collected tracks user activity, the number of completed activities, and the extent of participation, said Collin Griffin, technical project manager and a senior computer science student at Pitt.

Griffin and Tyler Olin, a Pitt alumnus of the School of Computing and Information who was hired as a user experience designer, agreed that the coding experience was shaped by the small team and quick turnaround.

Griffin called it “startup-esque” with a “design-as-you-go” attitude.

Olin noted that, with a small team, “we don’t have full organizational allowances that huge companies…might have. We had our own version of what an agile methodology would entail. We didn’t have the luxury of fully designing something and then handing it over and say, ‘Hey, code this.’”

Along with the paid and volunteer work of students, community partners were also essential to the success of 412Connect. Riverside Center for Innovation helped 412Connect find the BOBs that would participate in this launch.

“There’s a large, untapped potential base, especially around the university community and Black-owned and minority-owned businesses,” said Adam Gerard, a program support assistant at Riverside Center for Innovation.

The 412Connect team hopes to expand its platform to include other BOBs, or possibly other minority-owned businesses.

While 412Connect cannot solve Pittsburgh’s segregation, it can provide a bridge or two, even if they are virtual.

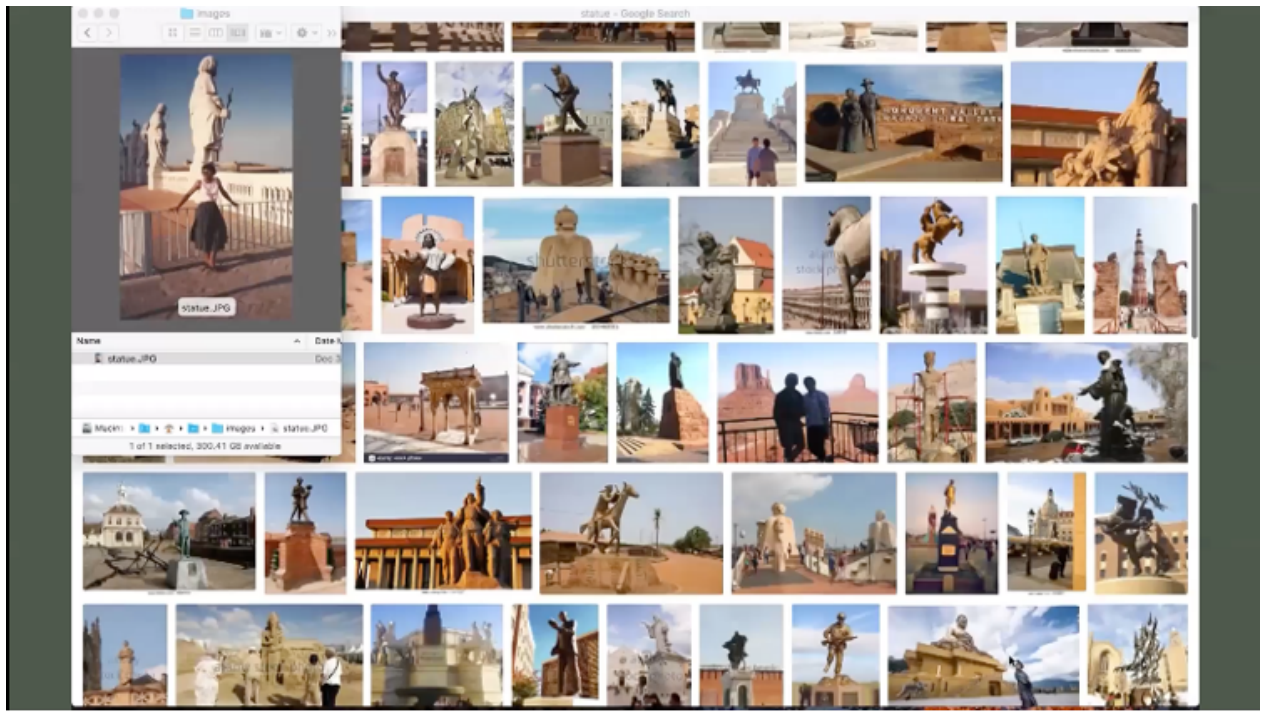
If you’d like to attend a CAASI meeting, email CAASI@pitt.edu. Follow them on Twitter @CAASIpitt.

Year of Data and Society

Denaturalizing the Algorithm with Mimi Ọnụọha

By Amanda Dibando Awanjo

Nigerian-American artist Mimi Ọnụọha begins her artist talk with a picture of her mother. This photo from Ọnụọha's informal family archive, wrapped in all of the natural warmth that emanates from family vacations and holidays, is contrasted to similar images pulled up within the Google image search engine. The distance between the algorithm that connects the images from her family archive and the images Google decides are similar is loose and the gaps apparent. As Mimi Ọnụọha points out, the poetry of the grid that connects these images and represents our contemporary relationship to image aggregation and organization is as recognizable to us as it is brittle. This was a part of Ọnụọha's moving image project, "Us, Aggregated, 3.0" in which the artist explores or relationship to often invisible algorithms and their very visible effects on our lives.



Screengrab from Mimi Ọnụọha's "Us Aggregated, 3.0"

Centered on the question, "in a tech mediated world, what appears as natural?" Mimi Ọnụọha's artistic practice explores the power imbalances that make up our technology empowered reality. Ọnụọha seeks to denaturalize what algorithms have made "natural" by encouraging audiences to pull at the threads of our technological world. By troubling the systems and processes that technology renders invisible, her work focuses on the "hair on the thread" of these hierarchal structures. That is to say that her work pulls at the thread of "tech companies who have unprecedented access to information and the ability to dictate the terms, upon which that information is seen. They return a version of the world that is interpreted but projected as it's the whole world".

While she describes herself as "form-agnostic," this attention to the power imbalance is a reoccurring theme in her multi-disciplinary work. Naming "those of us who create these systems and those of us who get caught up in them," her projects *Us Aggregated, 3.0*, *The Future is Here!*, *Natural, or: Where Are We Allowed to Be*, and *These Networks in Our Skin* focus in on how the embedded racial, class, and colonial hierarchies of these project-ed worlds "are treated as fact and valued" realities.

Part of Ọnụọha's work of destabilizing the systems of power that inform our technological world means finding new centers of power and collaboration. Within the project *Natural, or: Where Are We Allowed to Be*, Ọnụọha troubles space and racial hierarchy by considering "narratives of space and how those narratives fix people to certain spaces". For Black subjects, the "projected reality" that the grid and its invisible algorithms binds them within a particular space and a particularly narrative. Often this positions Black bodies, Black stories, and Black history on the grid and within the timeline without nuance and without historical context, and most importantly without the input of those

within the community. Positioning Black bodies as stewards of the technologies that inform our realities is a radical restructuring. This reimagining pulls on the naturalized world created by algorithms and realizes the space as brittle.

Learn more about Mimi Ọnụọha and her work. View her Year of Data and Society presentation.

Year of Data and Society Web Story: Learning from the Past, with Lizzie O'Shea

By Emma McGeary

On Wednesday, October 27, the Year of Data and Society at the University of Pittsburgh was pleased to welcome guest speaker Lizzie O'Shea for her talk "A Useable Past for a Democratic Future: How Looking Backward Can Help Us Navigate the Digital Revolution".

O'Shea— whose new book *Future Histories* details past theories and movements in technological advancement while discussing modern schools of thought in order to anticipate what our future tech may look like— is the founder and chair of the Digital Rights Watch, a group that advocates for human rights online.

While O'Shea has received awards for her advocacy and outreach, she recalls: "When I first started thinking and writing about technology many years ago, I always felt a bit like an outsider. I'm not trained as an engineer or as a computer scientist. I'm not a tinkerer". It soon became apparent, however, that the projection of the current digital revolution was something that impacted humans of every walk of life, not just those who were in "the know".

In her talk for the Year of Data and Society, co-sponsored by the Research, Ethics and Society Initiative and the Sara Fine Institute at Pitt, O'Shea addressed how technology exists in a space in our lives that allows it to be removed from reform and grow unimpeded in ways that negatively impact society. O'Shea's experience as a lawyer and history student allowed her to look critically at this digital revolution and realize that it is a concept that necessitates the involvement of a wide variety of people, not just those familiar with the inner workings of technology. This is because, as O'Shea states, "the history of technology— as the great historian of technology, Melvin Cransberg, likes to remind us— is a very human history".

But what does that mean, exactly? O'Shea described her realization that she was not the outsider she thought she was in the world of tech, saying "...technology is not just a field for programmers and developers. It's really about the systems created by humans with their own particular baggage from the past".

The past is the core of O'Shea's hope for the future. Not only is the discussion of technological advancement one that touches upon privacy concerns, it also raises questions about functions in society that O'Shea believes we can look to the past for answers on. By looking to history and acknowledging it, we are not only taking steps to prevent ourselves from repeating it but we are also allowing ourselves to be open to alternatives going forward.

The need for understanding our data as users of technology, and what our data means in terms of who it is for, what it says about us, and what choices we get in what is collected, is becoming more and more important. A regular user of social media, for example, may think that their data being collected by one site isn't as big of a deal as it's being made out to be. The issue, O'Shea reminded the audience, is that so many places have adopted this business model. With that adoption comes increased roles in influencing things like "government policy, that includes policing, incarceration, and social service delivery".

Looking to the past to explore technology's options for the future also allows us as consumers to understand the intersection of technology and labor, and the other voices that have influenced technology on its journey to where it is now. O'Shea highlighted the fact that those kinds of voices are needed in the present and in the future to preserve "decency, sustainability, and human flourishing". There are no "outsiders" when it comes to technology, as it impacts all of us; it is now more important than ever that we realize that we are able to do the same in return.

Tags

Event

Year of Data and Society

Applying Intersectional Feminism to Data Science: “Data Feminism” with Catherine D’Ignazio

By Jane Rohrer

As a part of the University of Pittsburgh’s Year of Data and Society programming, Catherine D’Ignazio gave a talk on November 5 about her highly acclaimed book, *Data Feminism* (MIT Press 2019). The book, co-authored with Lauren Klein, offers new ways of thinking about data as informed by intersectional feminism. D’Ignazio began her talk by contextualizing and defining intersectional feminism: citing key contributions from Francis Harper, Kimberlé Crenshaw, and the Combahee River Collective, intersectional feminism examines how different factors of power, status, and bias--such as gender, race, and class—create overlapping systems of discrimination and inequity. D’Ignazio went on to state that, while intersectional feminism is concerned with gender and sexuality, “it is not *only* even about gender.” As she went on to explain, “it is actually about power—it’s about understanding and challenging who has it and who does not.”

Klein and D’Ignazio wrote *Data Feminism* to apply an intersectional feminist framework to data science. In her talk, she explained precisely why this is so important. Data science has historically been rooted in ideals of objectivity and detached neutrality. Because of this, data and the sciences—fields typically coded as masculine or male-dominated—have been, in the mainstream, conceptually divorced from the humanities. These latter fields have typically been coded as emotional, subjective, and thus feminine. By applying humanistic—indeed, data feminist—frameworks to data science, D’Ignazio and Klein argue that we can understand and dismantle the racist, classist, and sexist biases latent in data technologies we use every day, all over the world.

In her presentation, D’Ignazio pointed out that popular news media is full of examples of corporate and government actors funding and proliferating sexist, racist, and classist data products—hiring algorithms that demote women’s resumes, facial recognition software that either targets or altogether ignores women of color, and beyond. And, D’Ignazio argued, we should not see these as fluke occurrences; instead, intersectional feminism recognizes data and its collection as one of the many ways that existing power structures are maintained. Data feminism seeks to formalize and apply this intersectional method to data science itself.

As part of this formalization process, D’Ignazio outlined the “7 principles of Data Feminism:” “examine power, challenge power, rethink binaries and hierarchies, elevate emotion and embodiment, embrace pluralism, consider context, and make labor visible.” But beyond this theory, a central goal of the book *Data Feminism* was to provide readers with concrete, tangible examples of what data feminist approaches to data science might look like. Each chapter of the book outlines one of these seven principles, illustrating what it really looks like to examine or challenge power—how one might rethink binaries or elevate emotion, and why context is so important to the visibilzation of labor.

One example D’Ignazio offered in her talk was that of fellow Year of Data and Science presenter Mimi Ọnụọha's project, “The Library of Missing Datasets.” In it, Ọnụọha outlines “data sets that a reasonable person might expect to exist.” If data sets are, in part, thought to help us humans understand and solve issues of pressing social need, Onuoha critiques the stunning absence of such high-need databases such as trans people killed or injured in instances of hate crime, people excluded from public housing because of criminal records, or a master database detailing if/which Americans are registered to vote. Because data science is so extraordinarily funded and powerful, the glaring absences pointed out by Ọnụọha’s project check several of D’Ignazio and Klein’s seven principles: Ọnụọha begs us to examine power and power structures, and elevate our emotional reaction to these profound gaps in what data could be, or is interested in, telling us.

D'Ignazio’s talk powerfully pointed out that datasets are anything but “objective,” and there are, indeed, emotional aims behind many contemporary, common uses of data; as *Data Feminism* illustrates, these motives do the most damage when they’re not made clear by data scientists. Racist, sexist, classist data projects *should* illicit emotional responses. We can start by honoring emotional responses to data, which always represents an inherently emotional world.

To learn more about Catherine’s work check out her website. View her Year of Data and Society Presentation.

Tags

Event

Year of Data and Society

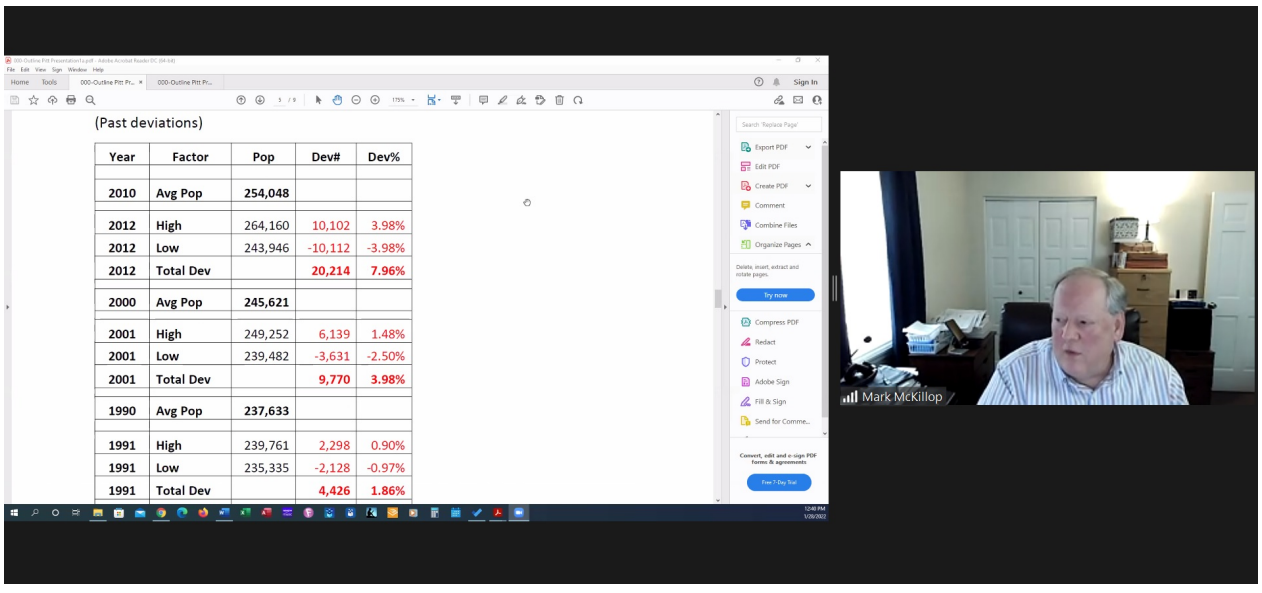
Legislative redistricting relies on data deep dives

By Briana Wipf

"You have to be a pretty serious data person to take dives into this data," Mark McKillop quipped toward the end of a Year of Data and Society presentation given Friday, Jan. 28, on the legislative reapportionment process in Pennsylvania.

That McKillop's comment came during a talk sponsored by Pitt's Year of Data and Society, his words may be more of an invitation than warning to attendees.

McKillop's hourlong Zoom presentation tackled the complexities of using population data and voter files in redrawing Pennsylvania congressional and state legislative maps. Reapportionment is done following the results of each decennial census. The U.S. Constitution requires that the 435 seats in the House of Representatives are apportioned to the states according to population, and states with more than one representative then have the task of drawing those district lines.



Year	Factor	Pop	Dev#	Dev%
2010	Avg Pop	254,048		
2012	High	264,160	10,102	3.98%
2012	Low	243,946	-10,112	-3.98%
2012	Total Dev		20,214	7.96%
2000	Avg Pop	245,621		
2001	High	249,252	6,139	1.48%
2001	Low	239,482	-3,631	-2.50%
2001	Total Dev		9,770	3.98%
1990	Avg Pop	237,633		
1991	High	239,761	2,298	0.90%
1991	Low	235,335	-2,128	-0.97%
1991	Total Dev		4,426	1.86%

Mark McKillop discusses the complexities involved in the redistricting process for state and federal elections at a Jan. 28, presentation sponsored by Pitt's Year of Data and Society.

Pennsylvania lost one House seat as a result of reapportionment following the 2020 census, necessitating the additional process of redistricting, or redrawing district lines to account for one fewer U.S. representative.

In addition to redistricting to account for the lost House seat, redistricting must also take place for state legislative districts in both the Senate and House.

The whole process, according to McKillop, is complex and difficult, both because of partisan bickering but also because there are several legitimate methods to determine how to draw those districting lines.

"There's never a definitive answer in how you approach this," McKillop noted. "A lot of this stuff is not cut and dry."

McKillop's presentation focused on the process of redrawing state legislative lines – the districts for the PA General Assembly. This process involves the Pennsylvania Legislative Reapportionment Commission, which is composed of five people – the Democratic and Republication caucus leaders and a chairperson selected by those members (or by the Pennsylvania Supreme Court, if the four members cannot reach a decision). Former Pitt chancellor Mark A. Nordenberg is the current chair of the LRC.

The LRC doesn't come up with the proposed redistricted legislative maps, however. That's up to the data wonks, a role McKillop was in over multiple reapportionment and redistricting cycles in Pennsylvania, most recently the 2011 Pennsylvania Congressional

reapportionment and the 2011-2012 State Senate Reapportionment.

According to McKillop, the numbers people take into consideration include U.S. Census data along with past election results and voter files.

Political parties want the redistricted maps to favor them, but the districts also have to be similar in population, and must also be compact and contiguous, and should preserve political subdivisions as much as is possible. A compact district is one that takes up as little physical geography as possible, and contiguous means the entire district is connected in some way. Due to population density, the advisement to preserve political subdivisions, or not breaking up counties, towns, or cities, is sometimes impossible, particularly in Philadelphia and Pittsburgh.

McKillop explained that having data about voters complements the Census data because it can provide “a decent view of trends and possibilities” for the competitiveness of future elections taking place in proposed districts.

At the time of this writing, the redistricting for State Senate and House seats remains underway, as is the selection of a map for PA Congressional (federal) districts. For the latter, the PA Supreme Court is now involved in selecting the map, due to an impasse between the the legislative and executive branches.

McKillop recommended taking a deep dive into the LRC website for more information on the reapportionment and redistricting process. Other resources include the U.S. Census Bureau’s Congressional Apportionment page; redistricting.org, a project from the Center for Urban Research and the Graduate Center at the City University of New York; and a national redistricting tracker from FiveThirtyEight.

The Committee of Seventy’s redistricting page is here. The Princeton Gerrymandering Project has kept tabs and graded the proposed maps. Fair Districts PA takes a more critical look at the state’s redistricting process.

Year of Data and Society

Student data can help instructors but can lead to ‘unintended consequences’

By Briana Wipf

About 20 attendees gathered on Zoom to discuss the ethics of using student data for learning analytics on Thursday, Feb. 10, in a workshop led by George Rehrey of Indiana University in Bloomington.

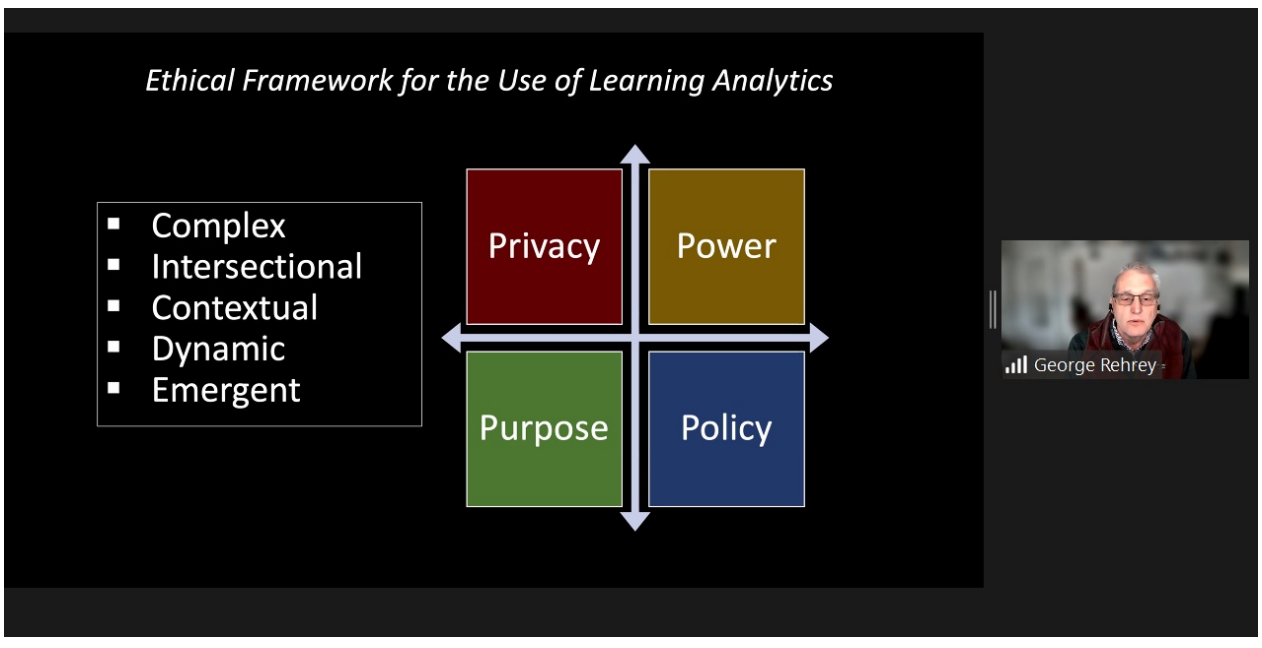
The workshop, sponsored by the Year of Data and Society, is one of multiple events focusing on student data. The second is a faculty panel, also on Zoom, on Wednesday, Feb. 23, from 3-4 p.m. The third session, also on Zoom, is on Thursday, March 17, from 4-5 p.m. and is targeted at students.

Rehrey’s presentation and following workshop, which was co-facilitated by Lizette Muñoz Rojas, a teaching consultant at the university’s Center for Teaching and Learning, occurred at a time when the discussion around the collection of student data has become more relevant than ever.

Rehrey is the founding director of Indiana University’s Center for Learning Analytics and Student Success, which “advances the widespread use of big data and student learning analytics, empowering faculty to conduct actionable scholarly research through the systematic collection, exploration, and analysis of data describing students, their observable activities, and outcome,” according to its website.

Rehrey said that he often uses the metaphor of the “wild, wild west” or “a train leaving the station” to describe how student data is collected and used, and the policies around that collection and use.

“We’re bumping up against this whole new frontier,” he said, relying on another metaphor to help attendees conceptualize both the novelty of the issue and the high stakes.



George Rehrey, founding director of Indiana University’s Center for Learning Analytics and Student Success, explains ethical considerations around collection of student course data at a Zoom workshop held on Thursday, Feb. 10, and sponsored by the Year of Data and Society at the University of Pittsburgh.

When the term “student data” is used, it may refer to more than one type of information. Some data is strictly administrative and includes information about demographics, enrollment, application data, and other categories. At Pitt, this administrative data is collected on PeopleSoft. This where students’ official records of credits earned and grades is kept and visible to Pitt’s administration and staff who keep track of degree completion and graduation eligibility, according to Amanda Brodish, Pitt’s Associate Vice Provost for Data Analytics, whom I interviewed following the workshop.

But de-identified data from PeopleSoft may also be available to faculty researchers who want "to conduct educational research that will contribute to what is known about teaching and learning," according to the Student Data webpage. Students are able to opt out of their de-identified information being included in such data, Brodish told me.

Another type of data is that which instructors might look at related to students' performance in their classes, and this type of data is available on a Canvas class site. Only the course's instructor can see this type of data, and an instructor can only see a student's data for that one course.

"We wouldn't be sharing Canvas information in the same way that we might be sharing academic information in PeopleSoft," Brodish said.

Rehrey pointed to a 2021 Inside Higher Ed story written by Melissa Ezarik that shared results of student surveys regarding data collection. Only 12 percent of students surveyed knew about their institution's data collection policy and had read it, for example. Of the remainder, 37 percent of students were aware a policy existed but had not read it, and 36 percent were not aware that such a policy existed.

The survey also found that students said they had "no concerns" about the collection data on attendance (66 percent), grades (55 percent), or enrollment (51 percent). Indeed, 85 percent of students approved of push reminders for assignment due dates.

Canvas, Pitt's learning management system, has a data analytics function that can be accessed by the instructor of a given class. The "New Analytics" functionality allows instructors to see information about students' grades and activity on the class site.

Much of Rehrey's presentation and the workshop component, which saw groups of attendees discussing the ethical concerns of two hypothetical scenarios, dwelt on the tension between using data to help a student, and of relying on data points – of grades or time spent on the class site, for example – with little additional context.

"Be careful with what I like to call unintended consequences of the use of this data," Rehrey cautioned the group.

For more on student data and privacy, Brodish recommended two webpages on the Registrar's website, one for faculty and staff, and another for students. Students can opt out of having their data shared or used in various ways, including their directory information being shared with a third party; their administrative data for scholarly research purposes; and results of predictive modeling being used with advisors and administrators.

Tags

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How linked open data can teach about the history of slavery

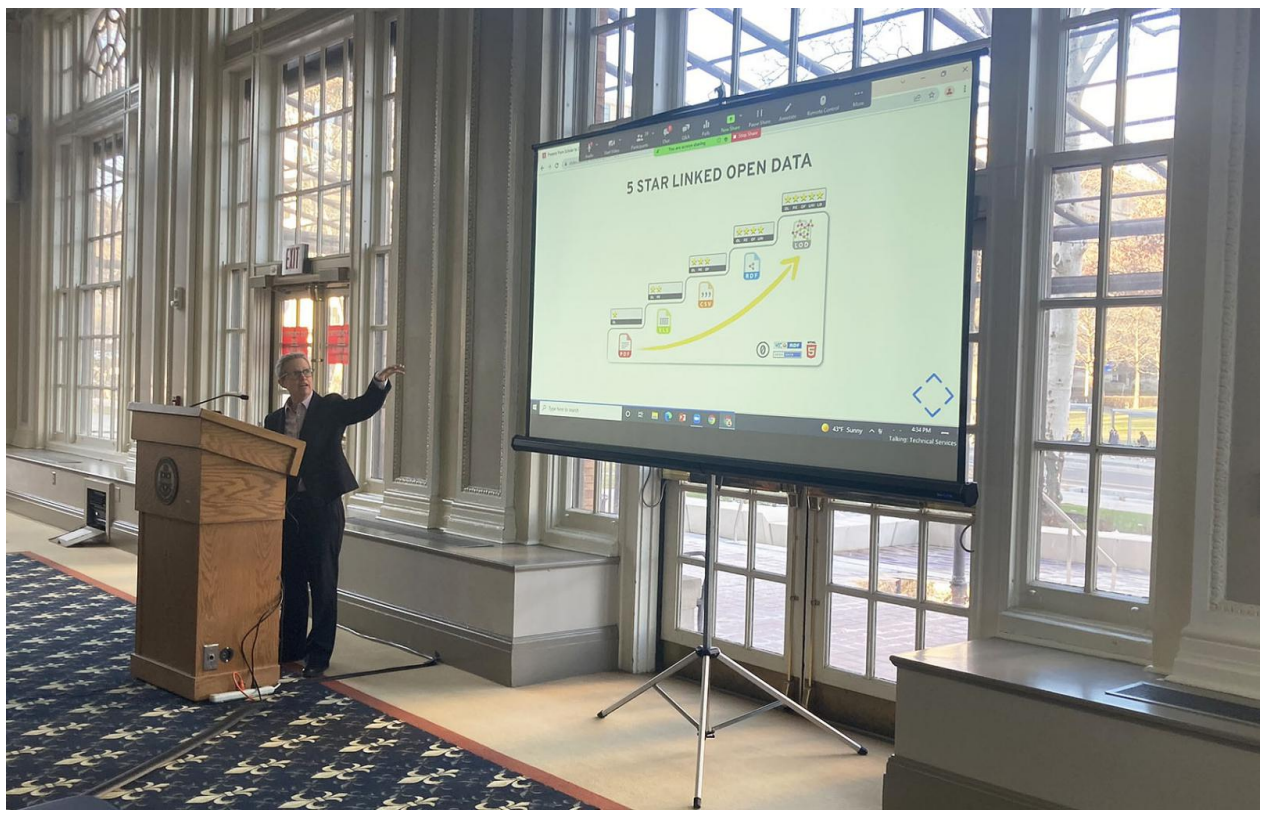
By Briana Wipf

About six years ago, most of America became aware of Georgetown University's history of slave ownership. The Jesuit institution sold 272 enslaved people in 1838 during financial difficulty, and media coverage explained that the university was now trying to track down descendants in order to pay reparations.

That story, says Sharon Leon, associate professor of digital humanities at Michigan State University, was new to the wider public at the time, but not to historians who have been studying the Jesuits' ownership of enslaved people in Maryland in the eighteenth and nineteenth centuries.

Leon would know because she is one of those historians, having begun her study of these enslaved people as an undergraduate at Georgetown University.

Leon presented her work on Thursday, Feb. 10, titled "From Scholar to System to Scale: Generating Meso-level Historical Data to Recover the Lived Experiences of Enslaved People," before a hybrid audience at the University of Pittsburgh. The lecture was a presentation of the Bernadette Callery Archives Lecture Series and the Sara Fine Institute of the Pitt School of Computing and Information and co-sponsored by the Year of Data and Society.



Sharon Leon discusses using linked open data to build meso-level historical data during a lecture on Thursday, Feb. 10, at the University of Pittsburgh. Leon proposes using such data to recover the lived experiences of enslaved people in the United States. (Photo by Briana Wipf)

Over more than a century, the Jesuits owned "a large number of enslaved people," Leon explained. The plantations they owned "were run and maintained by slave labor all along."

There was, for example, a blacksmith named Patrick Barnes, of the Bohemia plantation, who in 1792 decided to make plans to secure his and his family's freedom. He asked the Jesuits to purchase his wife, Mary, and their children, Isaac and Hannah from their owner. The Jesuits did, paying £40 for the three of them.

In 1793, Barnes began making payments on his family, and by 1797 had purchased all their freedom (Barnes' price was much more than the rest of his family because of his skills as a blacksmith). The Jesuits agreed to Barnes' deal with the condition that he settle

near Bohemia so they could continue to benefit from his services.

Stories like those of Patrick Barnes and his family are the ones that Leon wants to highlight in her research. She cares less about the Maryland Jesuits – other scholars have written about them anyway – and much more about the lives of the people who were enslaved by them.

With funding from the National Endowment for the Humanities, Leon began what would become Life and Labor under Slavery: the Jesuit Plantation Project. She found records of 1,144 enslaved people owned by the Jesuits between 1717 and 1838.

Leon's project is far larger than the Jesuit Plantation Project, however (Leon adds "II" to this project, to differentiate it from the project she participated in as an undergraduate at Georgetown). As a digital humanist, Leon is also interested in creating "digital infrastructure to support creating new knowledge in the humanities." In her project, that means creating linked open data infrastructure that allows for meso-level data, a type of data that "is derived, interpretive, [and] often related to entities outside the purview of cultural heritage collections."

Such a data strategy, Leon argues, avoids the dehumanization that comes with traditional archival practices. Rather, Leon calls for a different type of archival description, and this is where meso-level data comes in.

This approach "brings users and visitors into collections in new ways," Leon said.

Historians like her have spent countless hours in archives, amassing their own notes and building their own spreadsheets and data collections. But linking all that data together allows for a deeper and larger understanding of the lives of enslaved people in all their complexity.

The platform for this ambitious project is Omeka, for which Leon has served as director since 2012. Specifically, she is using the digital exhibit platform Omeka S, a system fundamentally tied to a linked open data framework.

With her own work on the Jesuit Plantation Project II and Omeka, Leon joined forces with other scholars and universities studying their own history of slave ownership, including Universities Studying Slavery. The result is On These Grounds: Slavery and the University, which aims to create a shared data model as well as an aggregation site for all these universities to share their own linked open data using archival records about their own institutions.

One of the goals of On These Grounds is "to surface this history in a way that pays deep attention to the humanity of these enslaved laborers," Leon explained. Doing so means that "the institutions themselves can grapple with what they've done."

With those ambitious goals in mind, though, the success of the project in some way hinges on vocabulary – vocabulary that is specific enough to usefully describe the lives of enslaved people but also broad enough to account for the plethora of human experience. One, Leon explained, is to change a person's race from the "person" category to "event" category in order to track how racial language changes over time.

The shared data model for On These Grounds is being tested now, with revisions being made with help from an advisory board.

Tags

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Data community connects at year-end celebration

By Briana Wipf

If you do a Google search for “computer scientists,” the result – as of this writing – is a long line of photos of white people.

The Black Voices in Computing project hopes to change this perception – that there are no Black computer scientists. With funding from the Year of Data and Society, they are on the path doing that.

Janet Majekodunmi and Shailey Gulrajani, both juniors in the School of Computing and Information, are involved in the project, which also includes Kylie Dougherty, Dmitriy Babichenko, Chelsea Gunn and Rosta Farzan.

“We want to highlight the accomplishments,” of Black computer scientists, explained Majekodunmi, a computer science major.

The group plans on presenting the Black computer scientists in an interactive, augmented reality exhibit that will be located at SCI.

“It’s very inspiring to learn about different scholars and different fields,” said Gulrajani, an information science major. “It’s nice to see the diversity.”

The group working on the Black Voices in Computing project presented their work in a lightning talk session on Friday, April 8, during the Celebration of the Year of Data and Society, an event held jointly online and in-person in the University Club at the University of Pittsburgh.

In addition to the lightning talks, the celebration event also included two panels. One focused on teaching students about data, and the other looked at sustaining impact of digital projects. A poster session wrapped up the afternoon.

Veena Vasudevan, third from left, discusses her educational project while, from left, Sera Thornton, Na-Rae Han, Bob Gradeck, and Uchenna Mbawuike listen. The group participated in a panel at the Year of Data and Society’s celebration titled “Facilitating Student Learning about Data at Pitt” on April 8.

The Year of Data and Society is part of the “year of…” initiative funded through the Office of the Provost.

According to Nora Mattern, the chair of the Year of Data and Society steering committee, the goal of the year was to build a community interested in “engaging with the societal implications of data and socially responsible data practices.”

That goal was very much realized, Mattern explained, and it was on display at Friday’s event.

“I’m watching conversations happening and people seeing themselves in other people’s work,” Mattern commented as people milled about the upstairs ballroom at the University Club.

Indeed, the funded projects were a testament to the interest across a variety of school and disciplines at Pitt, with faculty, students, and projects at regional campuses receiving funding.

“It’s not the case that we don’t have this community at Pitt…This work is happening at a number of places across the university,” Mattern said.

One of the presenters during the poster session was Jenn Chai, a PharmD candidate, who shared information about her project, PittPharmacy Global Health Day, which educated other students about research ethics and the data behind global health decisions.

Jenn Chai explains her project Pitt Pharmacy Global Health Day to an audience during the Year of Data and Society’s celebration on April 8. Chai, a PharmD candidate at the University of Pittsburgh, received funding from the Year of Data and Society to undertake the project.

Chai said she got interested in learning more about research ethics because she was learning about the guidelines of ethics but not the “why” behind the guidelines. After researching the history of pharmacy, she discovered some of the answers to her questions and thought others might like to know too.

She organized the PittPharmacy Global Health Day, which featured a keynote presentation and interactive learning activity that taught participants how data impacts global public health.

This is Chai's first funded project, and she said she was happy with how it was received.

As the Year of Data and Society wraps up – there are a few events still to come in April and even this summer – Mattern said that it's clear that the goal of creating community has occurred.

She and the rest of the steering committee hope to keep the momentum going. They built in the work of sustaining impact into the steering committee's responsibilities and have concrete plans to make that happen.

"We saw over the year that people across the university really felt a connection to this topic," she said. "This event made the community visible."

Adam Nie, right, a current master's of public administration student, and Emmaline Rial, an incoming master's of public administration student, draw the route they took to get to Pitt that day during the Year of Data and Society's celebration on April 8. This activity was part of an "Art and Data" table.