Discovering our Community through Data

Provost's Academy – August 2021
Syllabus

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Class Timing: Monday thru Friday during the week of August 16 – August 20. Sessions will be from 10:00am – 12:00pm and 1:00pm – 3:00pm each day.
Class Location: IS Building [135 N. Bellefield Ave]; Room 305

Course Description: You might have heard the expression "our modern world runs on data". What does that phrase mean, and what makes data so valuable? Is it the data itself? Is it the algorithm? Is it both? Is it the person using the algorithm? How can data be used to understand our communities and to create change? Answering questions based on data sounds like common sense, but how does that happen?

In this project, students will be introduced to socially responsible data practices and to the mindset of a data wrangler. You will learn first-hand how you can ask a question and explore possible answers with data they have access to. We will learn about the open data movement and use data to learn more about our own community here at the University of Pittsburgh. By the end of this project, you will understand that if data is collected and shared ethically and if the right questions are asked of it, data can be used for good and to benefit society and our local communities.

The Academic Year 2021-2022 at the University of Pittsburgh is the Year of Data and Society. Through this year's programming, we will explore the social implications of data. With this Provost Academy project, we kick off the year of programming!

Through this project, students will be able tol:

- Observe different types of data that document our communities
- Observe, count, and represent data in our everyday lives
- Describe the drivers and benefits of the open data movement;
- Distinguish between open and closed datasets
- Explain what "metadata" means and its purpose

- Understand purposes for and fundamentals of data tables and charts
- Work collaboratively to create a group presentation

Group Presentation: The Provost's Academy experience culminates on Saturday, August 21 with a group presentation, given to the Provost, the instructors, and all your peers in the various Academy programs. The class will be responsible for creating this presentation about what you've done, what you've learned, and what the broader audience at the University should understand about data and our communities now that you've had a week-long crash course experience. This is intended to be a fun opportunity to share our work with others. We will prepare a short 5-7 slide PowerPoint or poster and our group will have 10 minutes to present at the event.

Course Schedule:

August 16: 10am-12pm What is data?	Introductions and plan for course(30-40 mins) **Presentation**: What is data? What is open data? What is civic data? (NM) **Activity**: Introduction to keeping a Data Journal (10 mins) **Tool Tour:** Introduction to Western PA Regional Data Center (WPRDC) (JY)
August 16: 1-3pm What is data?	**Tool Tour:** WPRDC Look and See Activity and Sharing **Presentation**: Data justice - biases in data, privacy and data (30 mins) (NM) **Activity:** When to share data? (30 mins)
August 17, 10am-12pm Data Tables	**Data Journal:** Share-out; discussion of organizing your data [30 mins] **Presentation**: About Data Tables ; Common Problems; Good Approaches [60 mins] (JY)
August 17, 1-3pm	**Activity**: Reorganizing Data Journals

Data Tables Metadata	**Presentation:** What is metadata? (NM) **Discussion**: What didn't make it into your data table? **Activity:** Metadata activity
August 18, 10am-12pm **Data Charts**	**Small-Group Activity:** Aggregating class data from data journal and creating bar chart (JY) **Presentation**: Overview of types of charts (20 mins) (NM)
August 18, 1-3pm **Data Charts**	**Activity**: Choosing a chart type (30 mins) **Report outs:** Share your group's charts **Tool Tour:** Creating Charts using tools (JY)
August 19, 10am-12pm	**Case Studies:** Telling stories and impacting communities through data (NM) **Activity:** Exploration of vaccine data collection, management, and sharin **Discussion**: Potential uses and impact of your building dataset
August 19, 1-3pm	**Activity**: Paper-based mapping **Tool Tour:** Census R Package (JY)
August 20, 10am-12pm	**Presentation and Tool Tour:** Drawing connections to databases and SQL (JY) **Discussion:** Presentation Approach
August 20, 1-3pm	**Presentation Development and Practice**

Office Hours: The class has no formal office hours, but students are encouraged to use e-mail to set up any times they need with the instructors to discuss the course, the questions you're raising, the final presentation, issues about college life in general, or any other matters. Furthermore, you should feel free to contact the instructors after the class has ended should you have additional questions or require continued guidance.

Class Engagement and Discussions: For you to get the most out of this class, it is not only important but essential that you keep current with the readings and are willing to participate in class discussions. The classroom is intended to be an open space for discussion, where all ideas and questions are valid to engage. It is important that all people in the class—instructor and students—treat everyone's viewpoint with respect. This doesn't mean that viewpoints won't be critically assessed, but it does mean that no one should feel afraid to voice their opinion in the class. However, no personal attacks or ad hominem arguments (directed against a person rather than the position they are maintaining) will be tolerated.

You will not be graded on the at-home activities for this project, but we do expect that you will be completing them and coming to class sessions prepared to discuss them.