CYPLAN 255

Urban Informatics and Visualization

Lecture 01 – Course Introduction

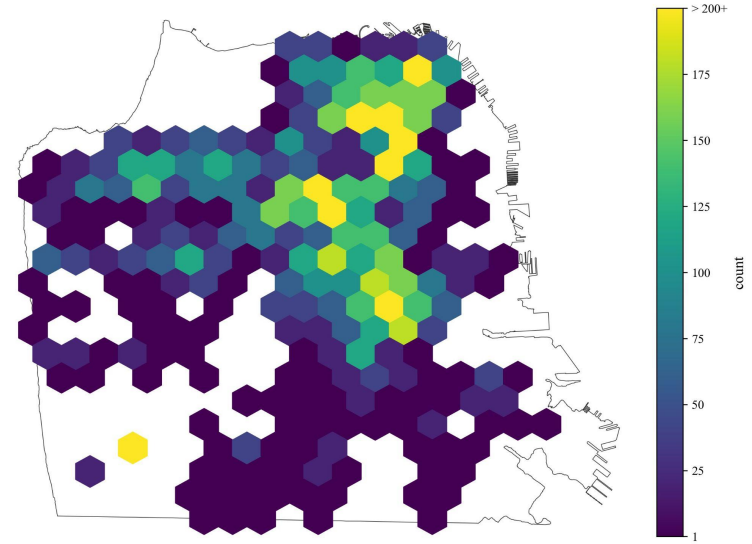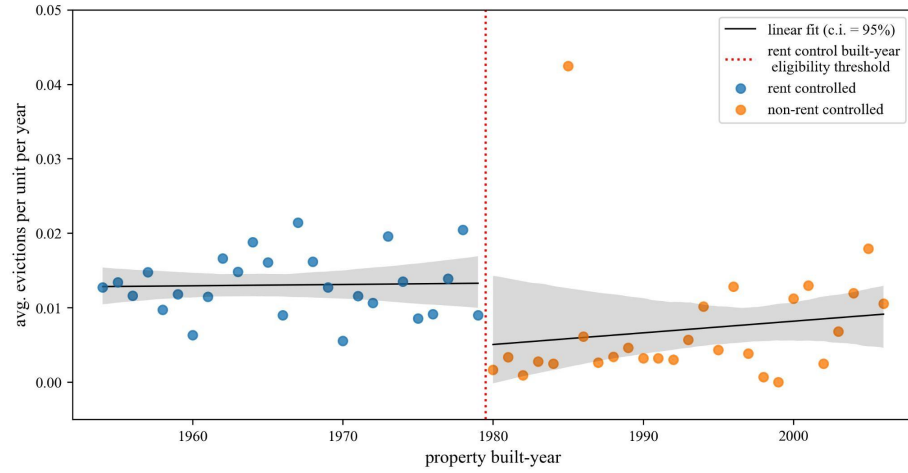January 19, 2022

Agenda

1. Introductions/Zoom check
2. Background
3. Motivation
4. Syllabus
5. For next week ("homework")
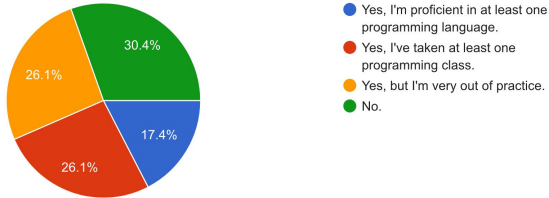6. Questions

1. Welcome

Who am I?

Rupert

Who is your GSI?

Who are you?
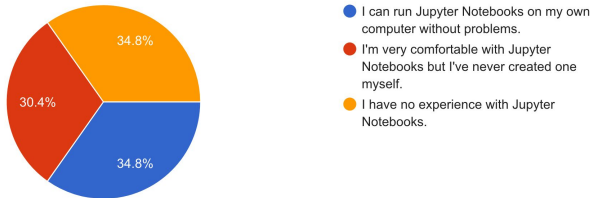

Do you have any programming experience?
23 responses

- Yes, I'm proficient in at least one programming language.
- Yes, I've taken at least one programming class.
- Yes, but I'm very out of practice.
- No.

30.4%
17.4%
26.1%
26.1%

Which statement best describes your level of experience with the Python programming language?
23 responses

- I write Python code at least once a week.
- I'm comfortable using Python when I have to.
- I've written Python code for more than one class in the last two years.
- I was introduced to Python in a previous class but I don't remember much.
- What's Python?

78.3%
8.7%
8.7%

Which statement best describes your level of experience with Jupyter Notebooks?
23 responses

- I can run Jupyter Notebooks on my own computer without problems.
- I'm very comfortable with Jupyter Notebooks but I've never created one myself.
- I have no experience with Jupyter Notebooks.

34.8%
30.4%
34.8%

Have you ever used GitHub before?
23 responses

- Yes, all the time.
- Yes, a few times before.
- Yes, once before.
- No.

43.5%
21.7%
34.8%
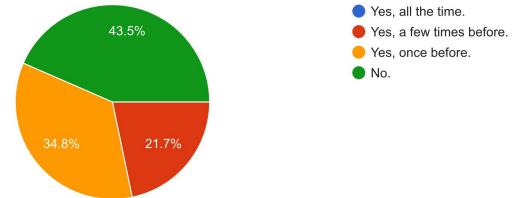
2. Background

What is "Data Science"?

computational statistics

data science?

data visualization
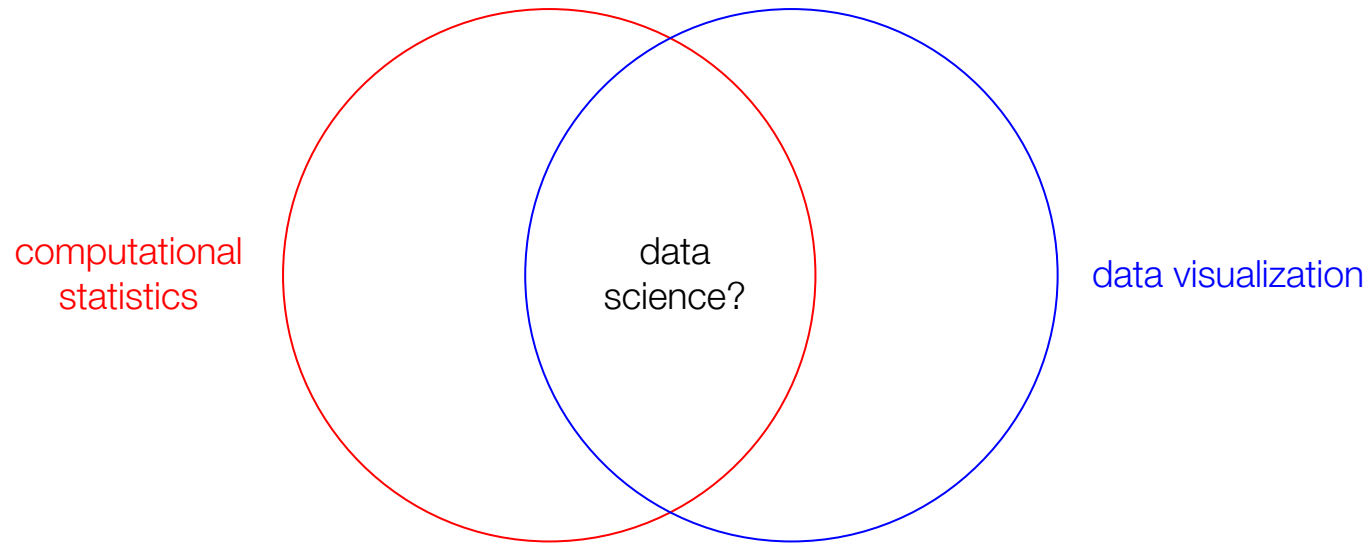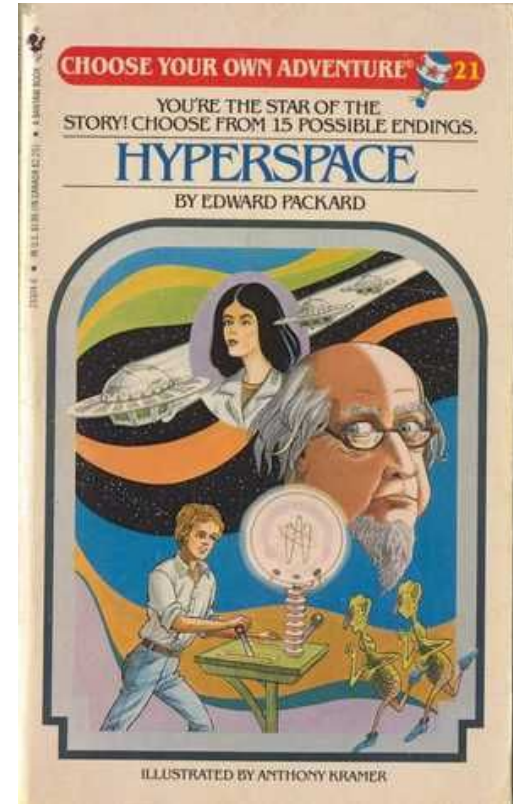
What is "Urban Informatics"?
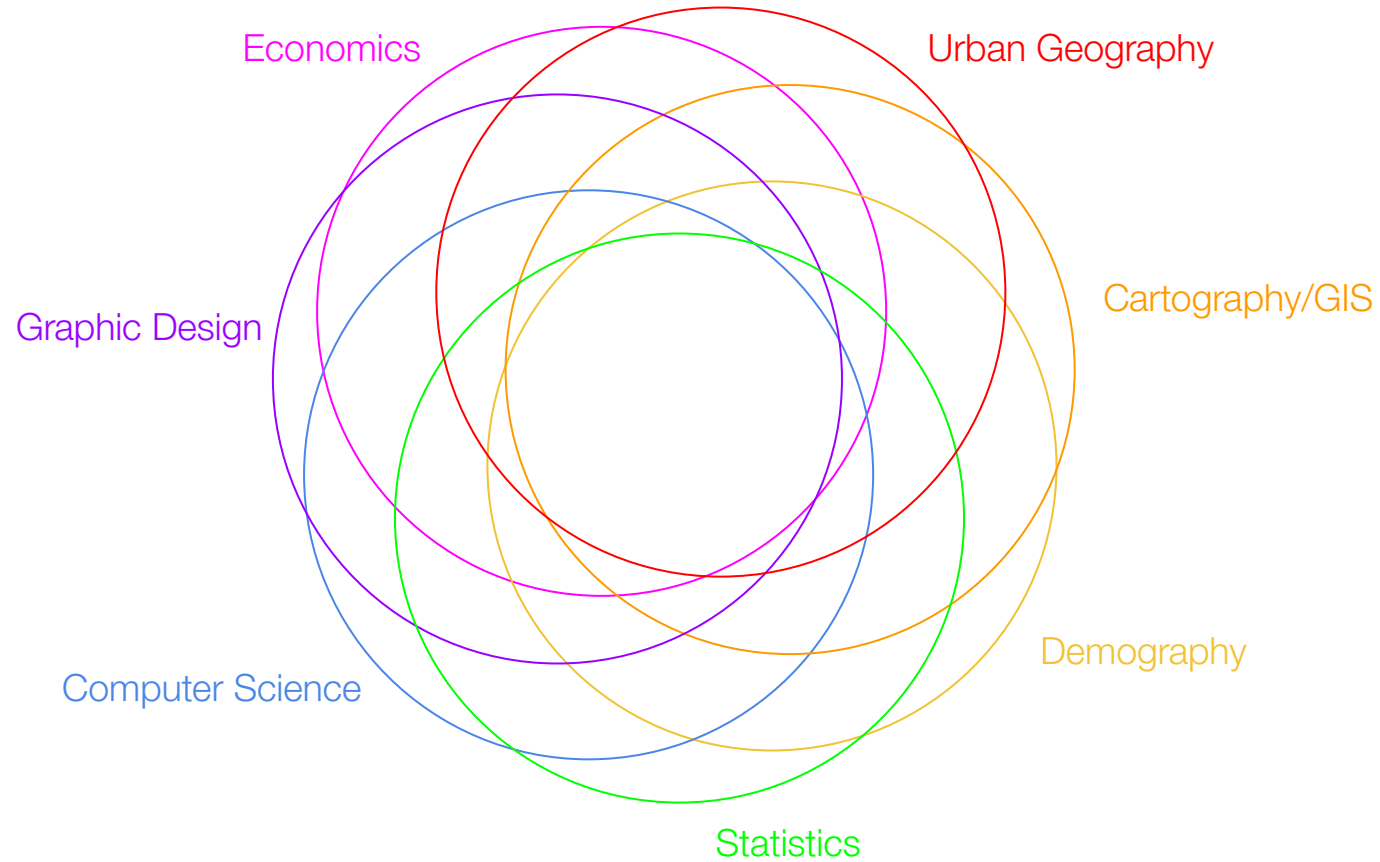
What is "urban informatics" NOT?

- A GIS course
- A computer science course
- A statistics course
- Etc., etc.

"Choose your own adventure"

- Pre-requisites
- Cross-listed
- Readings
- Project-based learning

Why write code?

- Precision
- Scalability
- Automation
- Open source FTW

Projects from previous years

- [Annaliese Mackey](#)
- [Raleigh McCoy](#)
- [Dining Liu](#)
- [Jessica Camacho](#)
- [Alex Garbier](#)
- [Ethan Ebinger](#)
- [Shazia Manji](#)

What makes a good data analysis/project?

1. Tools
2. Lots of code
3. Data
4. Novel data
5. "Big" data

What makes a good data analysis/project?

1. ~~Tools~~
2. ~~Lots of code~~
3. ~~Data~~
4. ~~Novel data~~
5. ~~"Big" data~~

What makes a good data analysis/project?

- A good research question
- Equal parts data + human judgement
- Combine datasets
- Recognize natural experiments (be opportunistic!)

Keys to success in this course

1. Be kind
2. Demonstrate humility
3. Be curious
4. Push yourself
5. Develop a "toolkit"
6. Use me as a resource

3. Syllabus

4. For next time

"Homework"

1. Fill out the course survey
2. Join the class slack group
3. Create an account on github.com and "fork" the class repo
4. Make sure you can run Python in one of the following ways
   a. Install Anaconda Python *(recommended)*
   b. Check that you're able to log in to https://datahub.berkeley.edu
5. Submit three (3) links to public/open datasets

Misc. announcements

- Check out the D-Lab
  - [Intro to Bash + Git](#) - Feb 10
  - [Python Fundamentals](#) - Feb 1-10
  - [Data Wrangling with Python + Pandas](#) - Feb 15
  - [Python for Data Viz.](#) - Feb 17

5. Questions?