MUSA Capstone Introduction

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Welcome!

- Intro
- Syllabus (30 min)
- *10 minute break*
- Breakouts (45 min)
- *10 minute break*
- Presentation: The Turnout Tracker (60 min)

The Capstone Project

The final project is an. . .

- independent study
- on a substantive question
- using GIS data

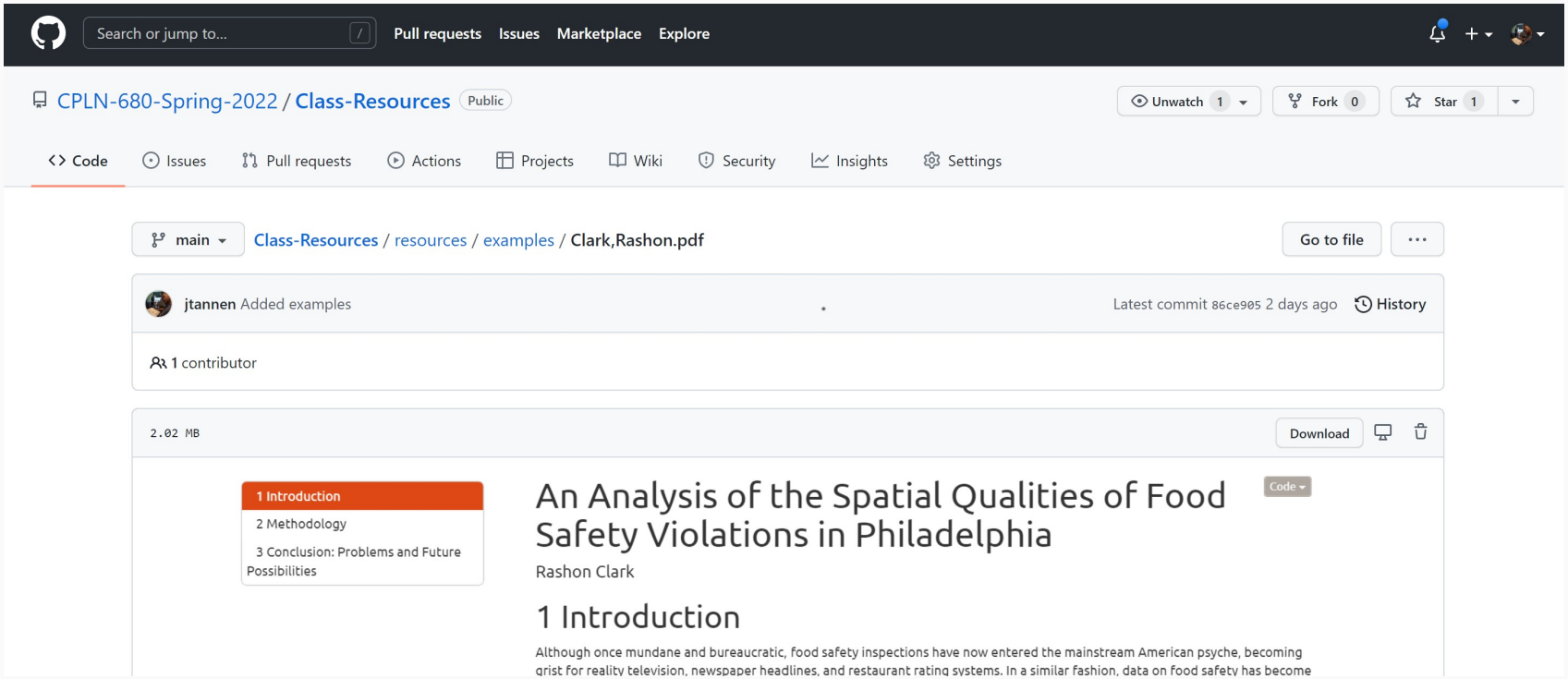
I'm here to help, but ultimately you are responsible for driving and executing your project.

Possible project deliverables

- Research paper on a topical question
- Research paper on GIS methodology
- Dashboard*
- GIS tool

Examples from past years

- Spatial analysis of food safety violations in Philadelphia
- Spatial methods for heritage preservation
- Latitudinal shifts of grass plant functional types
- Evaluating two-seat rides for SEPTA



Project components

- Final deliverable.
- Presentation to the class.
- Complete GitHub repository* with raw data, processed data, outputs.

GitHub

This course will use GitHub as its primary site.

- https://github.com/CPLN-680-Spring-2022/Class-Resources
- Final project submitted as a GitHub Repo.

This is my first time using GitHub to teach, so will be flexible.

Course time

- Working groups on projects
- Student presentations
- External speakers, “Anatomy of a project”
- Lectures on Spatial Methods, Better Engineering for Researchers

A note on technical requirements

My approach to programming is practical.

- You only ever need "good enough," and there will always be someone more expert.
- You will see enormous gains (errors, iteration speed) by improving your engineering 20%.
- Push yourself in reasonable directions for final project.
- The most important thing is to overcome $0 \rightarrow 1$, teach you how to learn for yourself.

A survey

Do you plan on using. . .

- ESRI
- R
- Python
- Something else

A survey

What is your familiarity with...

- Git & GitHub
- Command line
- Spatial Econometric methodologies (e.g. "autoregression")

What other GIS topics would you like to learn?

A survey

How confident are you in your idea for project?

1 - Not confident at all.

5 - I know exactly what I want to do.

A note on the calendar

The calendar is aggressive at the beginning to discover blockers.

NOTE: This is the first time I'm teaching this course, so what follows may be tweaked based on how things go. I promise one week's notice before any changes.

Calendar

Date	Assignment Due (Tentative)
Jan 14	Initial Topic Brainstorm
Jan 21	Project Proposal 0
Jan 28	GitHub Repo
Feb 4	Data Summary Analysis, Presentations A
Feb 11	Project Proposal 1, Presentations B
Feb 25	Mid-point Work In Progress Report, Presentations A
March 4	Feedback for 2 peer projects. Presentations B
March 11	*Spring Break*
March 25	Peer Code Review
April 15	Final Presentation (1)
April 22	Final Presentation (2)
April 29	*No Class*, Final Projects due

Assignments

syllabus.Rmd will be source of truth.

TBD how to submit assignments; either GitHub, Canvas, or email.

Details

Office Hours: Wednesday 6-8pm, by appointment

Sign up on Calendly: https://calendly.com/jtannen/office-hours

Grading

- Final Project 50%
- Final Presentation 25%
- Assignments & Participation 25%

Next Week

- Due: Project Proposal 0
- In class: GitHub

Questions?

Breakouts

In groups of three. . .

- 15 min: Overview your projects
  - What is the question you're trying to answer?
  - What data sources are available?
  - What is your most important next step?
- In 15 min, come back to this room.