Purple Haze

CSE 583

Final Presentation

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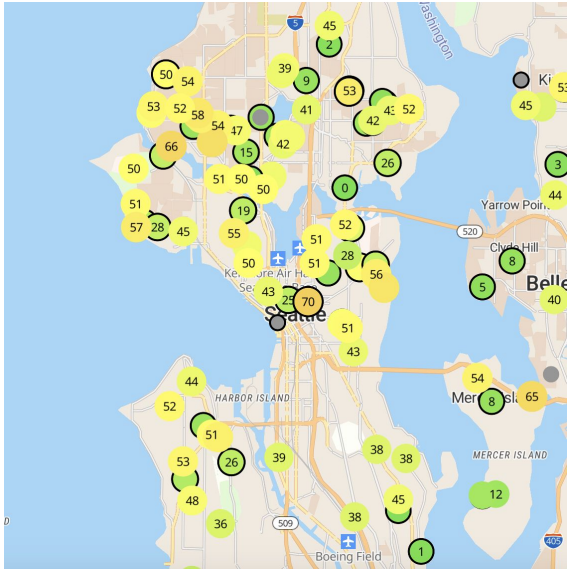
MOTIVATION

How are Purple Air sensors distributed across Seattle?



How does air quality around Seattle correlate with socioeconomic indicators?

Data

Purple Air

Six months of hourly PM2.5 data from every sensor in Seattle

PurpleAir

Seattle Racial & Social Equity Composite Index

Several socioeconomic metrics for every census tract in the city.

Seattle GeoData

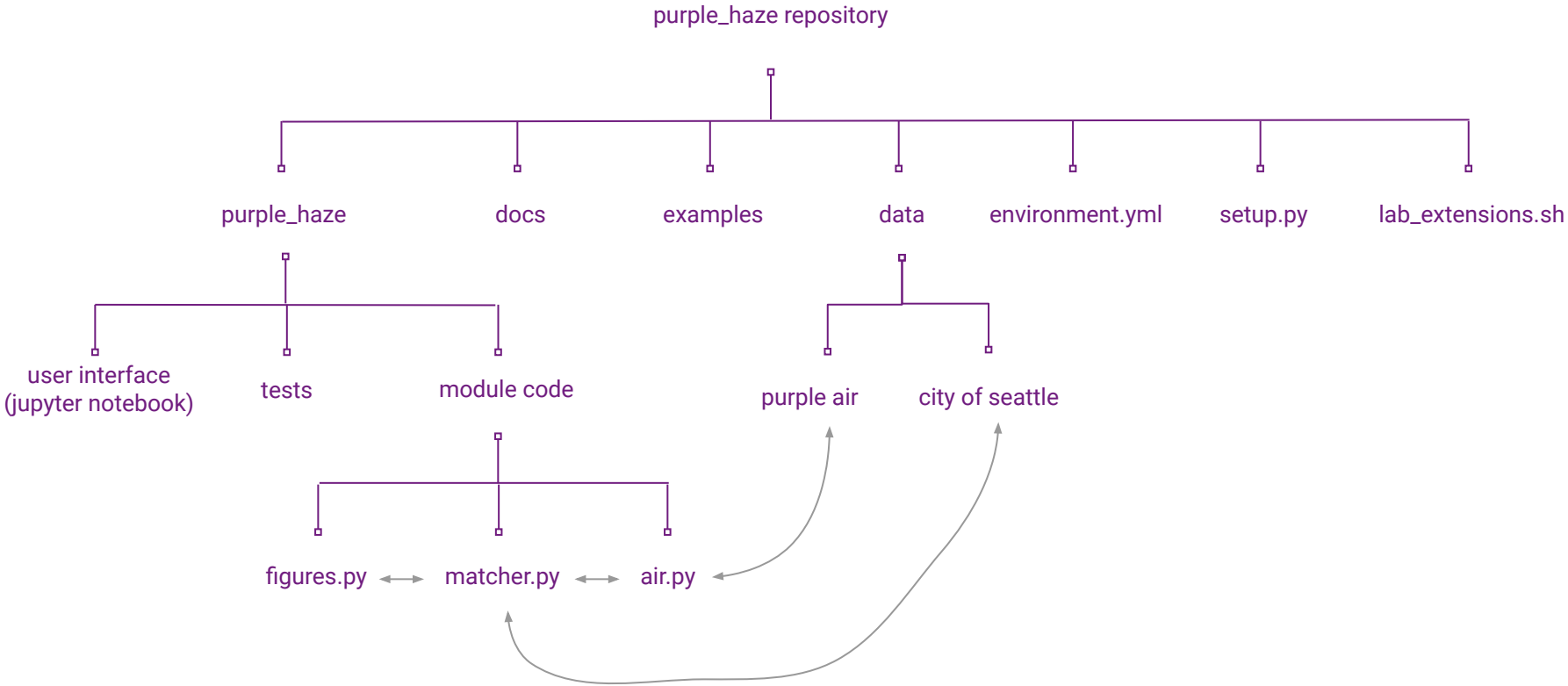
Use Case #1

- Determine where Purple Air sensors are being purchased and installed in Seattle
- Discover demographic info about where sensors are being installed

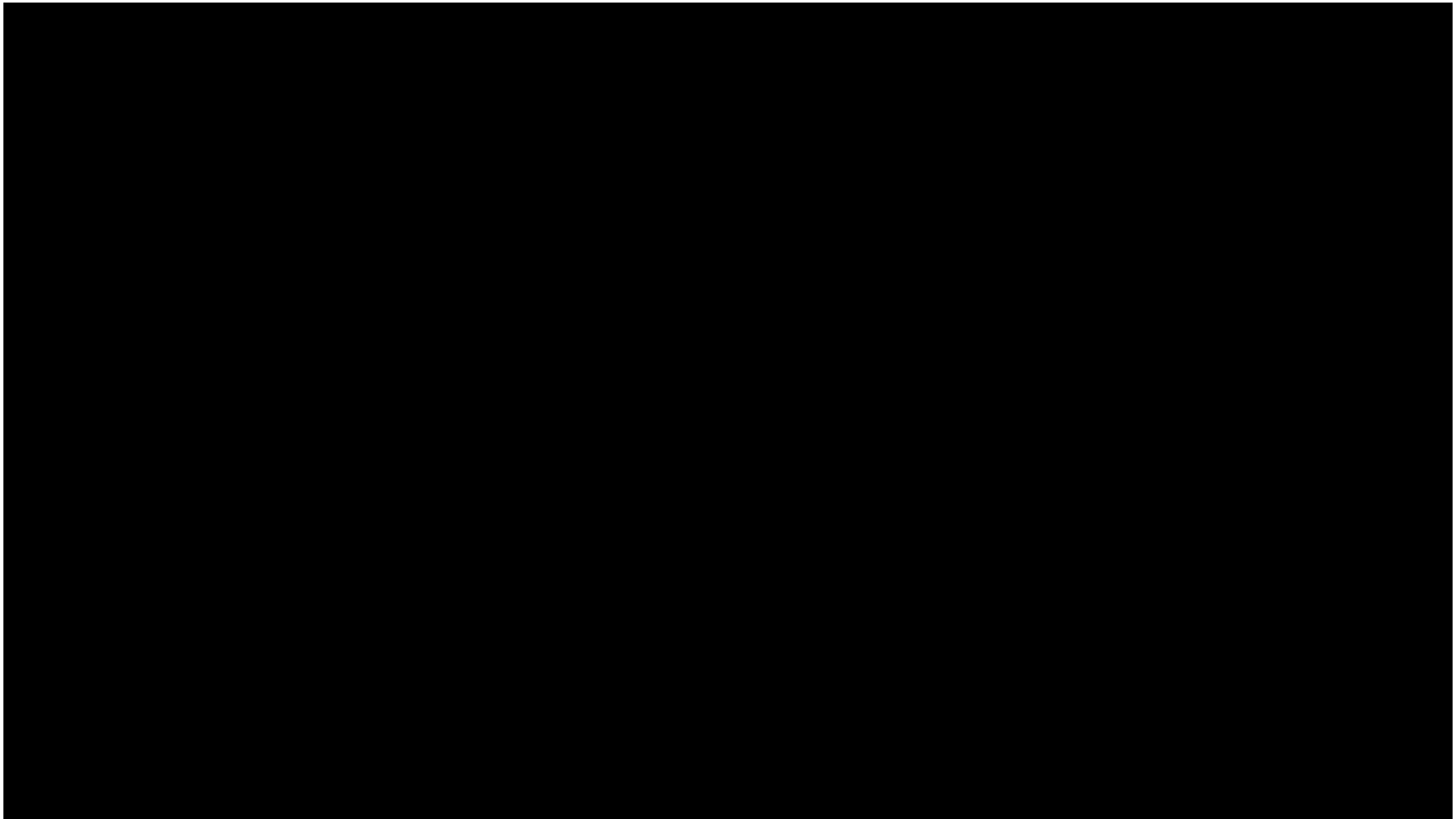
Use Case #2

- Study hyper-local variability in Seattle's air quality
- Assess relationships between air quality and socioeconomic indicators

Repo Structure



Short Demo



Lessons Learned

- Not always easy to determine when to rely on error catching of your underlying packages vs when to write your own
  - Learned to write useful error messages based on what's likely to need to be changed specifically in the world of this project
- Try to use a single package for visualization as mixing packages is not guaranteed to work
- Only include packages you manually import in the virtual environment