READ:

Report and Code Submission

For each deliverable, you must submit both a report and the associated code. Your report should include the following sections for Deliverable 1:

- A brief introduction to your problem statement.
- Details of the data collection or cleaning steps you've undertaken.
- Exploratory Data Analysis (EDA).
- If your analysis has led to answers for any of the questions or if you've formulated hypotheses, especially for at least questions.
- Individual contributions of each team member. We recommend that each team member writes 3-4 lines about their contributions, which can then be compiled into the report.

Mandatory Attendance

- When a deliverable or checkpoint is due, it is mandatory for all team members to attend the lab session for that week. For example, if Deliverable 1 is due on November 1st, all team members must attend the labs on November 2nd or 3rd.
- During the lab session, each team is required to give a brief presentation lasting 2-3 minutes to showcase the work done for the deliverable, followed by a 1-minute Q&A by TAs.
- Team attendance during these lab sessions is crucial. If your team faces time conflicts and cannot attend the labs together, please reach out to the TAs on Piazza. We can schedule a separate presentation during our office hours. If that isn't feasible, we will work together to find a suitable time for the presentation, perhaps after 5 PM, that accommodates all team members. This has to be done before Thursday of that week. Any requests after that won't be considered and your team will lose points for that deliverable/checkpoint.

- Office Hours: Tuesday 2:00PM-3:00PM Location: CDS 6th floor
- Office Hours: M/W 6-7PM Location CDS 926

Deliverable 1 - Analysis

- Sufficient data should have been collected to perform a preliminary analysis of the data and attempt to answer one question relevant to your project proposal which you will submit as a pull request.
- Yes, we've collected data and started analyzing it.

If data has already been collected for your project you must answer two questions.

- Collect and pre-process a preliminary batch of data (in progress)
- Perform a preliminary analysis of the data (in progress)
- Answer 1-2 key questions from base project (in progress, probably questions 1 and 2 or just one, also talk about the hypothesis we may have on each question -> add to report doc)
- Submit all of the following information (code, notebooks, answers to questions) as a PR to your team's branch on github. (Add your TPM and TA as reviewers!) (in progress)
- Submit the Weekly Scrum report to the gradescope and upload to google drive. (done)
- Make sure to identify which team member is doing which tasks on the scrum report

<u>TO DO:</u>

- Answer the two questions. (in progress still need to finish collecting/analyzing data)
- Submit code to the github on team branch (in progress / Done)
- Scrum report for next week (in progress)
- Individual contributions of each team member. We recommend that each team member writes 3-4 lines about their contributions, which can then be compiled into the report. (everyone needs to do this individually)

Questions to answer: (choose 2)

1. What is the yearly change in air quality for Boston residents based on their proximity to different types of transportation infrastructure, specifically, proximity to public transportation options or proximity to roads?
2. How do areas with poor air quality compare to areas with better air quality based on different demographic characteristics, specifically:
    a. Race/ethnicity (ACS)?
    b. Area median income/ income
    c. Housing density
    d. Population density
    e. Social vulnerability
3. What is the relationship between health data and What are the trends in yearly change in air quality for Boston residents by neighborhood, zip code.

Hypothesis: Higher population density correlates with higher housing density, and appears to be loosely correlated with a higher social vulnerability index. We predict that higher

population/housing density will be correlated with worse air quality in general due to increased density causing worse traffic and congestion for all transportation systems.

Neighborhoods Median income:

	Median Income
United States	$62,843
Massachusetts	$81,215
Boston	$71,259
Allston	$58,141
Back Bay	$111,185
Beacon Hill	$110,841
Brighton	$77,625
Charlestown	$127,400
Dorchester	$55,009
Downtown	$88,750
East Boston	$60,510
Fenway	$41,041
Hyde Park	$72,953
Jamaica Plain	$97,069
Longwood	$42,404
Mattapan	$55,968
Mission Hill	$42,803
North End	$103,999
Roslindale	$84,604
Roxbury	$30,534
South Boston	$111,541
South Boston Waterfront	$153,545
South End	$86,950
West End	$97,438
West Roxbury	$94,538

Source:
http://www.bostonplans.org/getattachment/e2eb8432-ac72-4a7e-8909-57aafdfbecd9