Deliverable 0 (Team 1)

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a. What is the project focus/overall goal?
   The overall goal is to Increase the accessibility and transparency of the Boston planning, zoning and development process.
   Specifically, we will analyze the data given to answer the following questions:
   - Finding distribution of affordable housing inventory in D9 based on AMI% and # of units.
   - Finding the future distribution of planned/ permitted housing.
   - Finding changes over time in Allston/Brighton.
   - Finding the number of units that off-campus college students occupy in the district.

   We could not find comprehensive visual analytics from recent times (post 2018), and hence we plan on making similar visualizations in this project with updated information.

b. What type of data will you collect or be analyzing?
   We will mostly be working with tabular data from various sources like Massachusetts Land Parcel Database, data.boston.gov; university accountability reports provided by Spark, trend reports about the percent increase and proportion of incoming students and houses for each year, etc. Along with it, we also have data from maps, which will help us better visualize the housing problem at hand.

c. What are potential limitations of the project?
   This project suffers from the most common issues among all data science projects: within scope of the data we are unable to judge whether it contains some form of bias that may undermine our results. Pre-processing and cleaning of data will certainly be conducted, but the nature of this data (that it is collected from various sources) determines that duplication can't be totally avoided. Since the aim of this project is to provide people with affordable housing, effectiveness is largely dependent on the amount of housing resources we can fetch, which is not under our control.

d. Why is this project important or Why did you choose this project?
   The Affordable Housing Snapshot project has pertinent societal impact and deals with a problem that we have faced first-hand before moving in here. A majority of Boston residents are renters, and the Boston Housing Authority (BHA) reports there to be a waitlist of 40,000 potential tenants in the D9 district alone. Providing a centralized affordability dashboard to the BHA can enable localization of affordable housing in the area along with an extensive list of smaller landlords willing to lease at lower costs. This would help cut down the waitlist and allow more, smaller landlords to be matched with potential tenants. The affordability crisis in Boston is shown in Fig. 1.

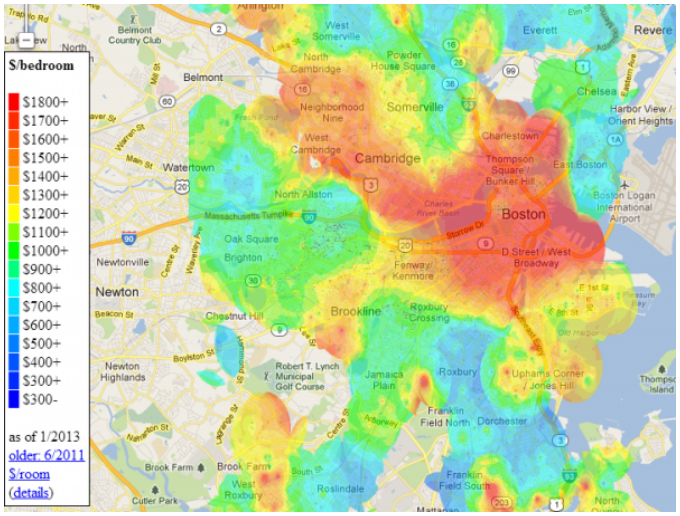

Fig. 1. Heatmap of average price variation in and around Boston (D9). Credit: Boston Magazine "*Boston's Crazy Rental Prices",* 2013.

This is a problem that we international students have faced too as our team members moved from India and China to the US. Finding off-campus housing, especially for international grad students, is a process that can take weeks searching, contacting landlords, deciding on price-to-convenience tradeoffs, reviewing localities, etc. We chose this project because we understand the importance of a centralized information kiosk or a dashboard that leverages Data Science to provide analytics to tenants, especially one coming from a recognized and trustworthy source as the BHA.

e. What are your team's next steps? *(include action items/tasks)*
Client meetings, making sure we know the exact requirements of the client, start working, cues from deliverable 1
Our next steps include:

- Scheduling weekly meetings with the team for progress reports and discussion.
- Understanding the problem at hand in detail after meeting the client.
- For all the provided data sources, download and analyze their attributes to find relationships and categorize them to aid our data science workflow in merging similar data and using dissimilar data for different purposes.
- Work towards meeting all objectives for deliverable 1.
- Think about how we can work beyond the base project so we can be inclusive of more aspects for this project.