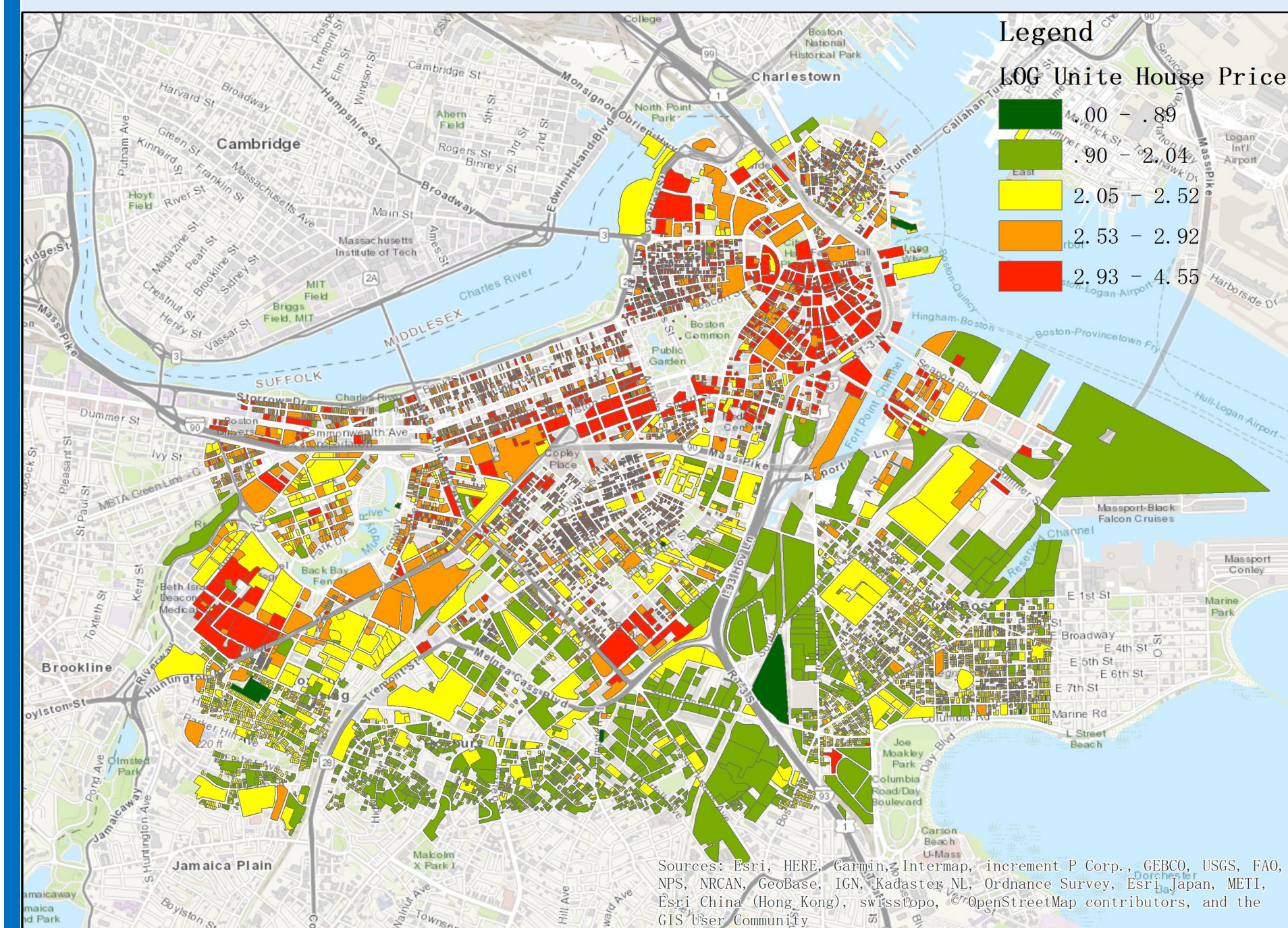


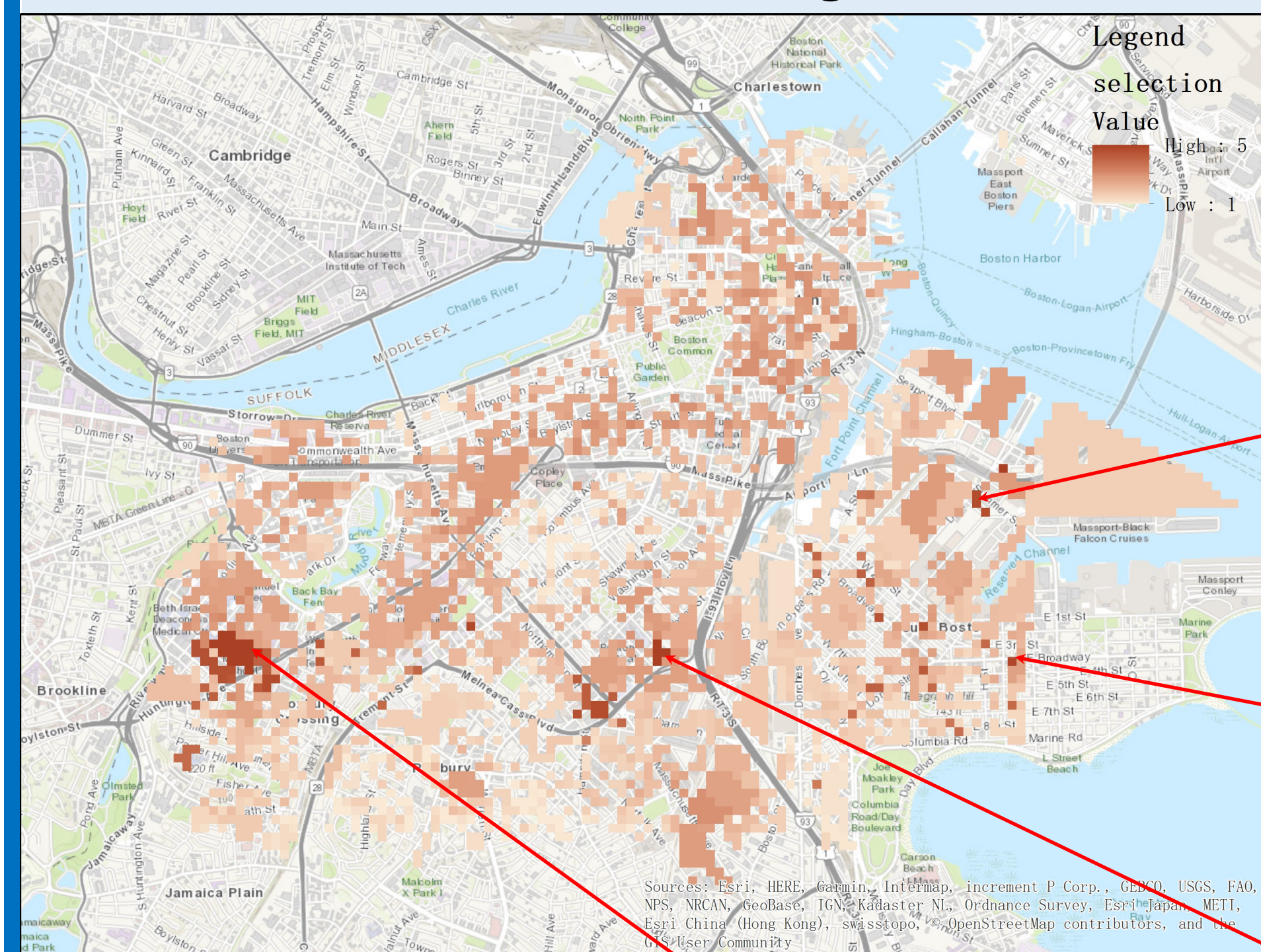
Best House Locations to Invest in Boston Downtown

A Suitability Analysis of Under-valued Housing Locations

The Distribution of House Unit Price

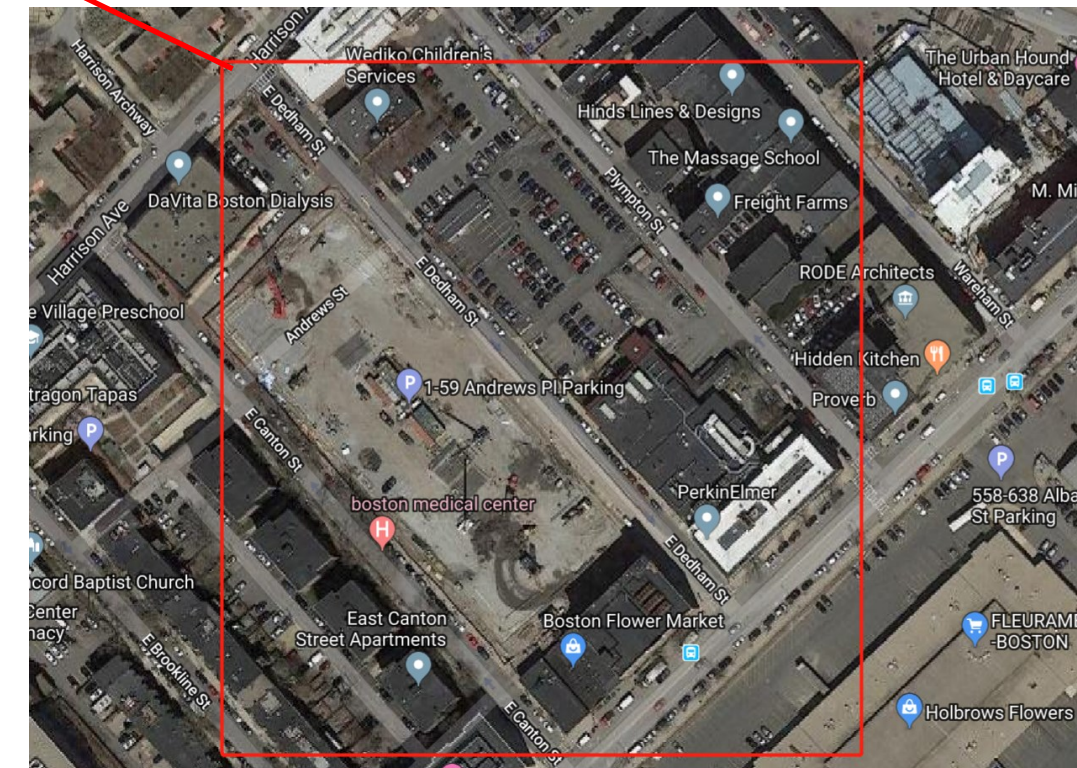
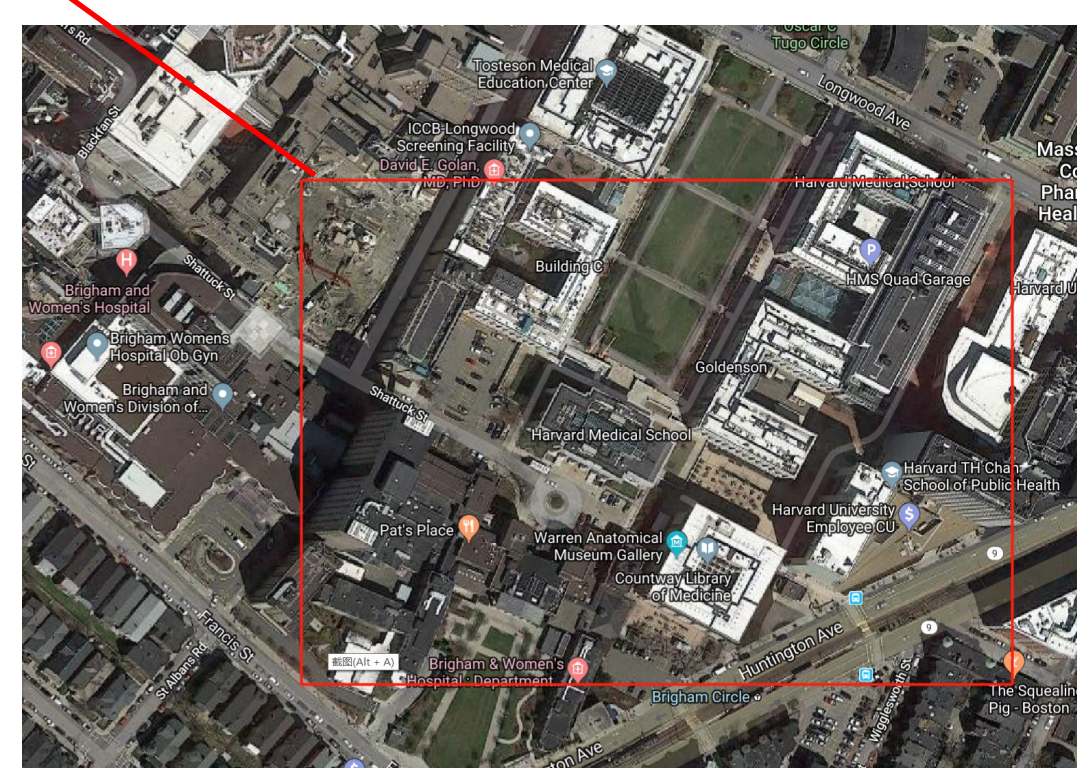
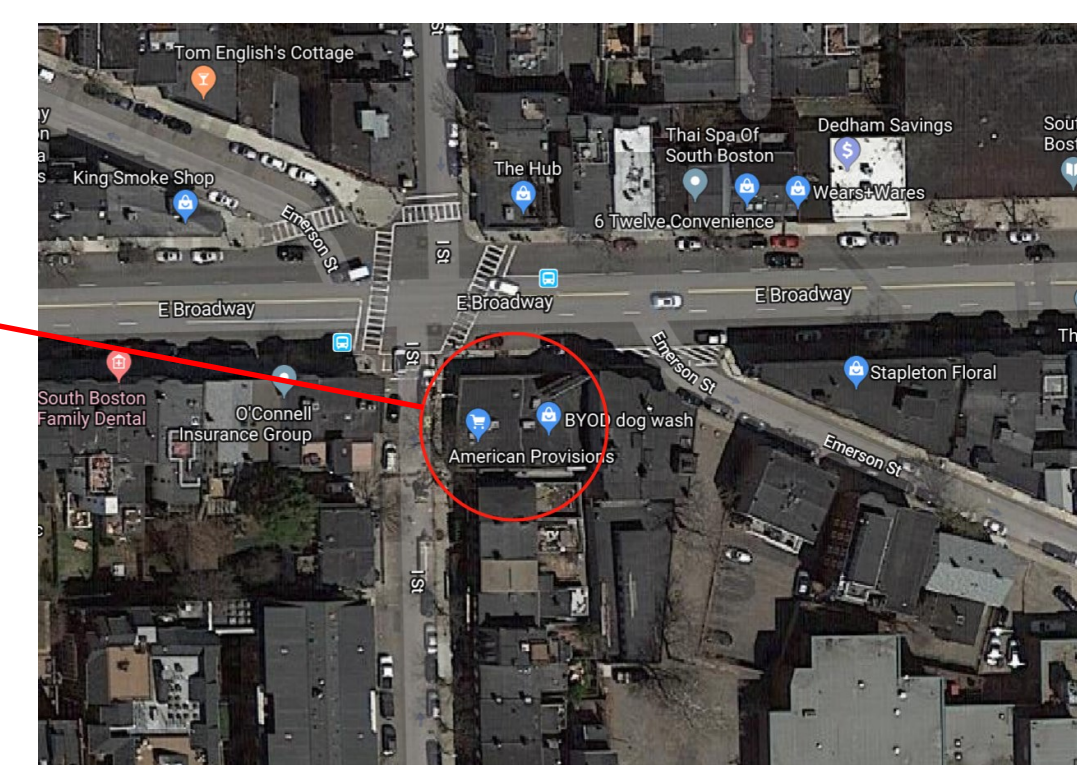
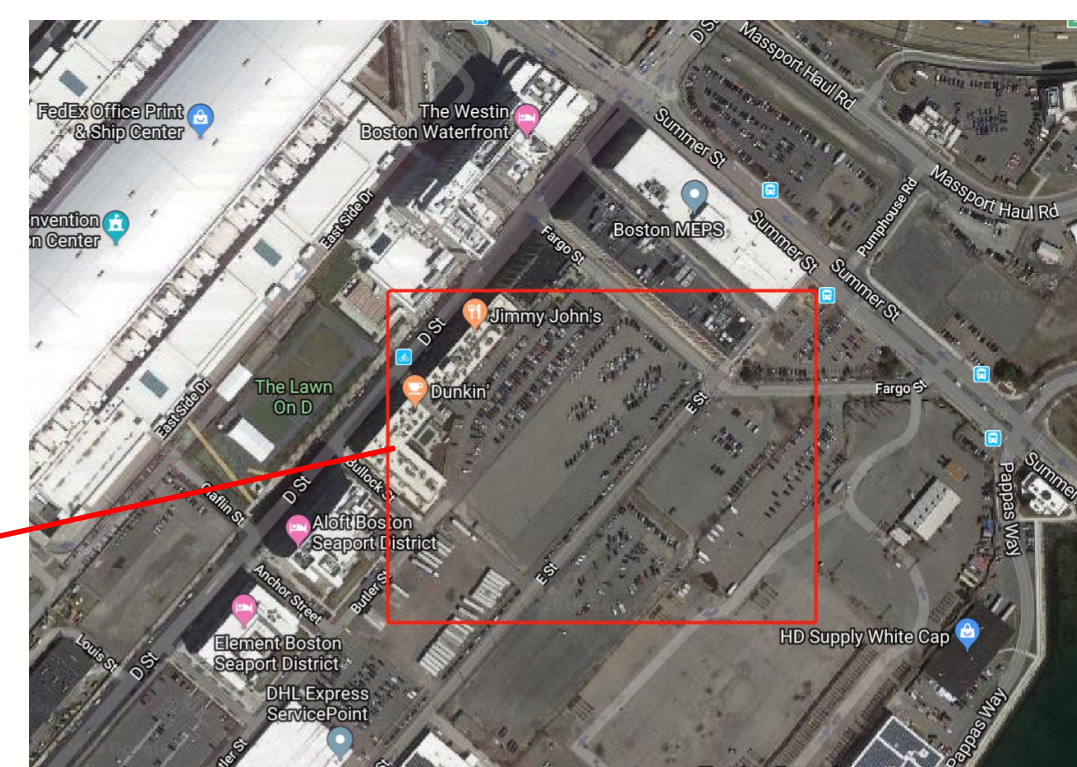


The Location of Worth Investing Houses

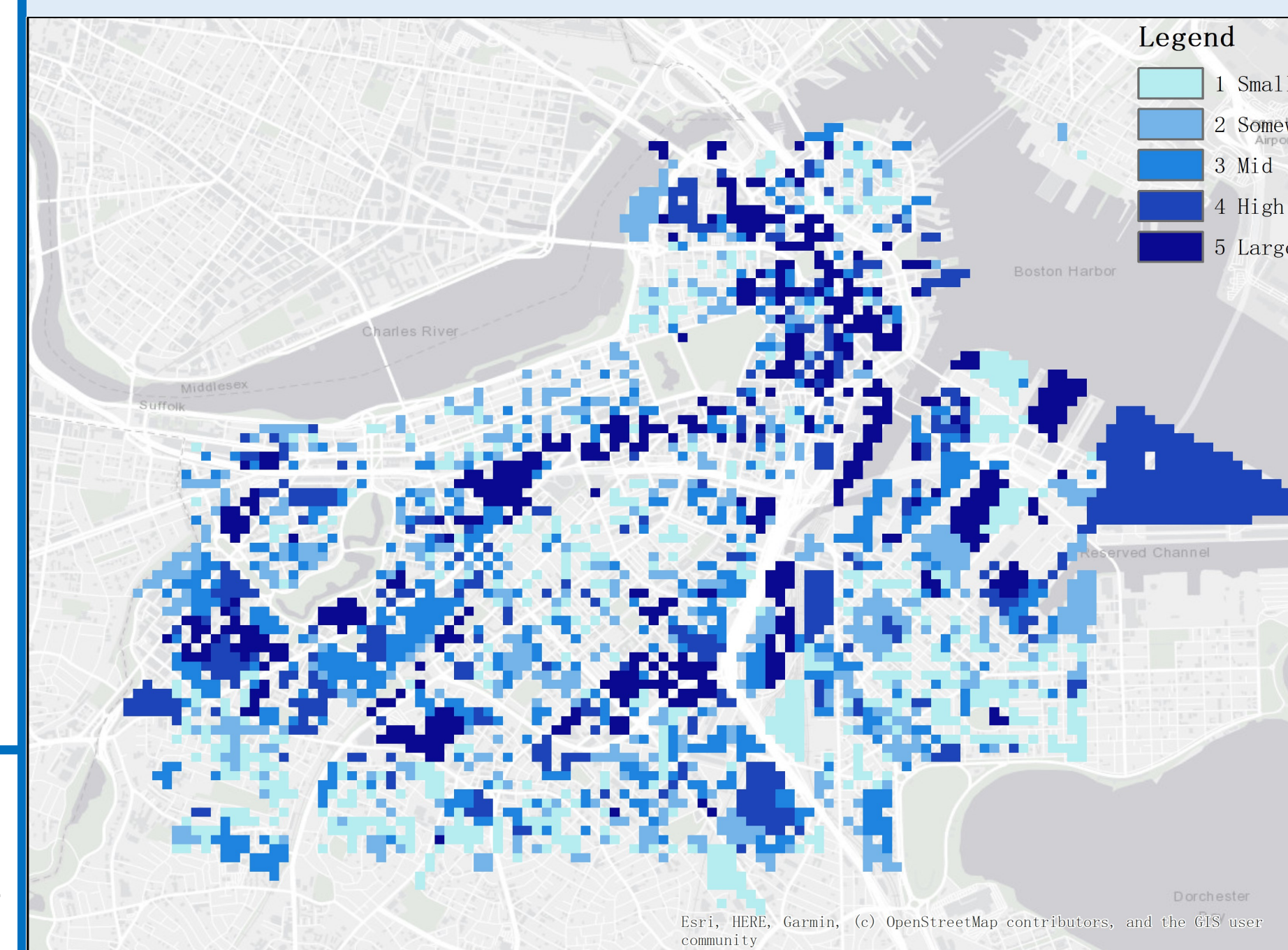


Introduction:

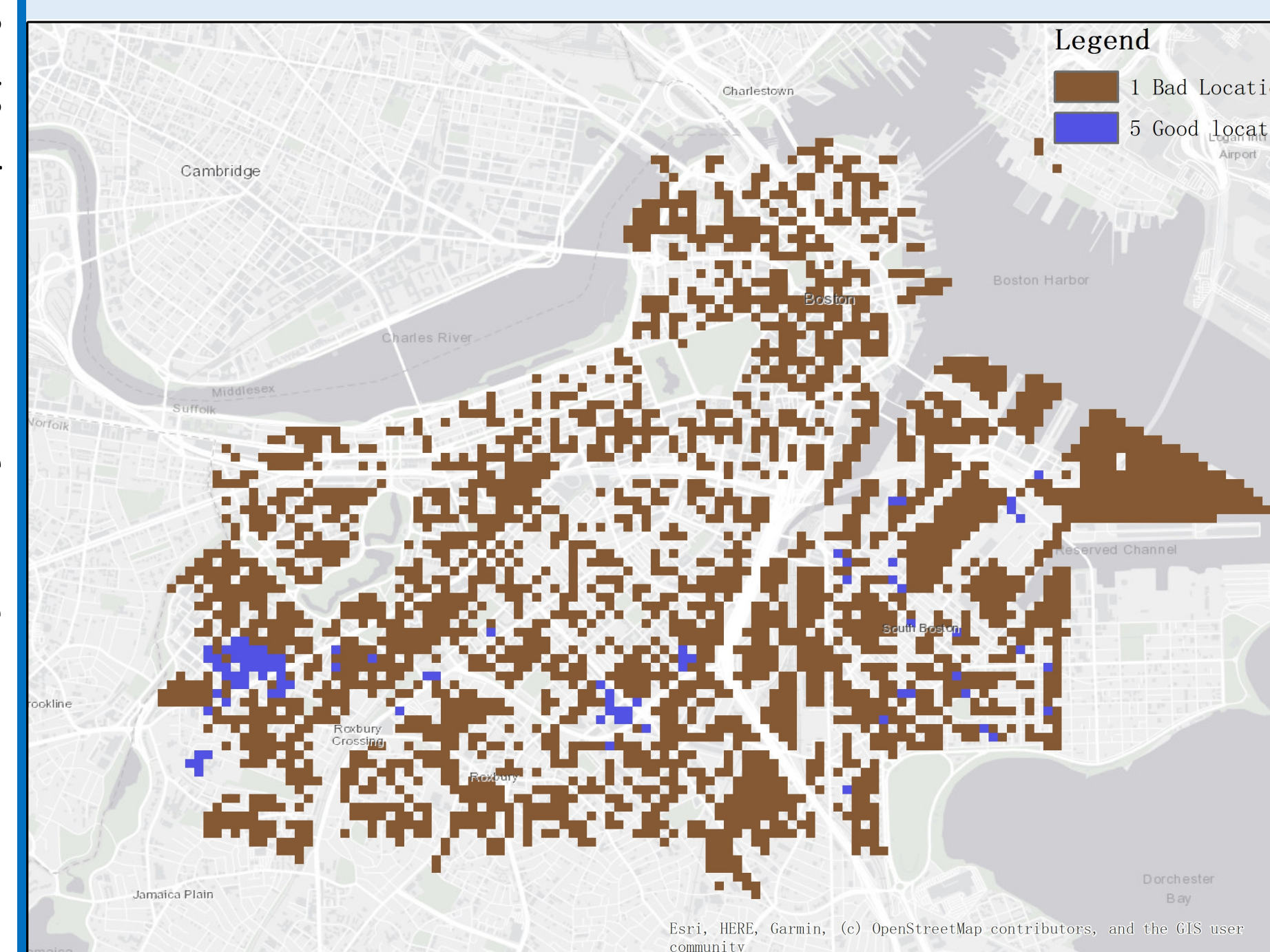
Clustering is an interesting phenomenon showing the geographical information of correlation. Economists have thought about how clustering of banks and firms will affect various economic activity. In the housing market, if one low-value house is surrounded by high-value houses, either it has some fatal defects, otherwise, the house value might be underestimated by the market. Therefore, after careful selection with raster calculation, it might be helpful to find where are these potential houses in the Boston downtown areas. However, these suggested locations should also be verified by physical visit, in case there are unexpected fatal defects. This poster shows how to find potential under-valued locations in the Boston Downtown.



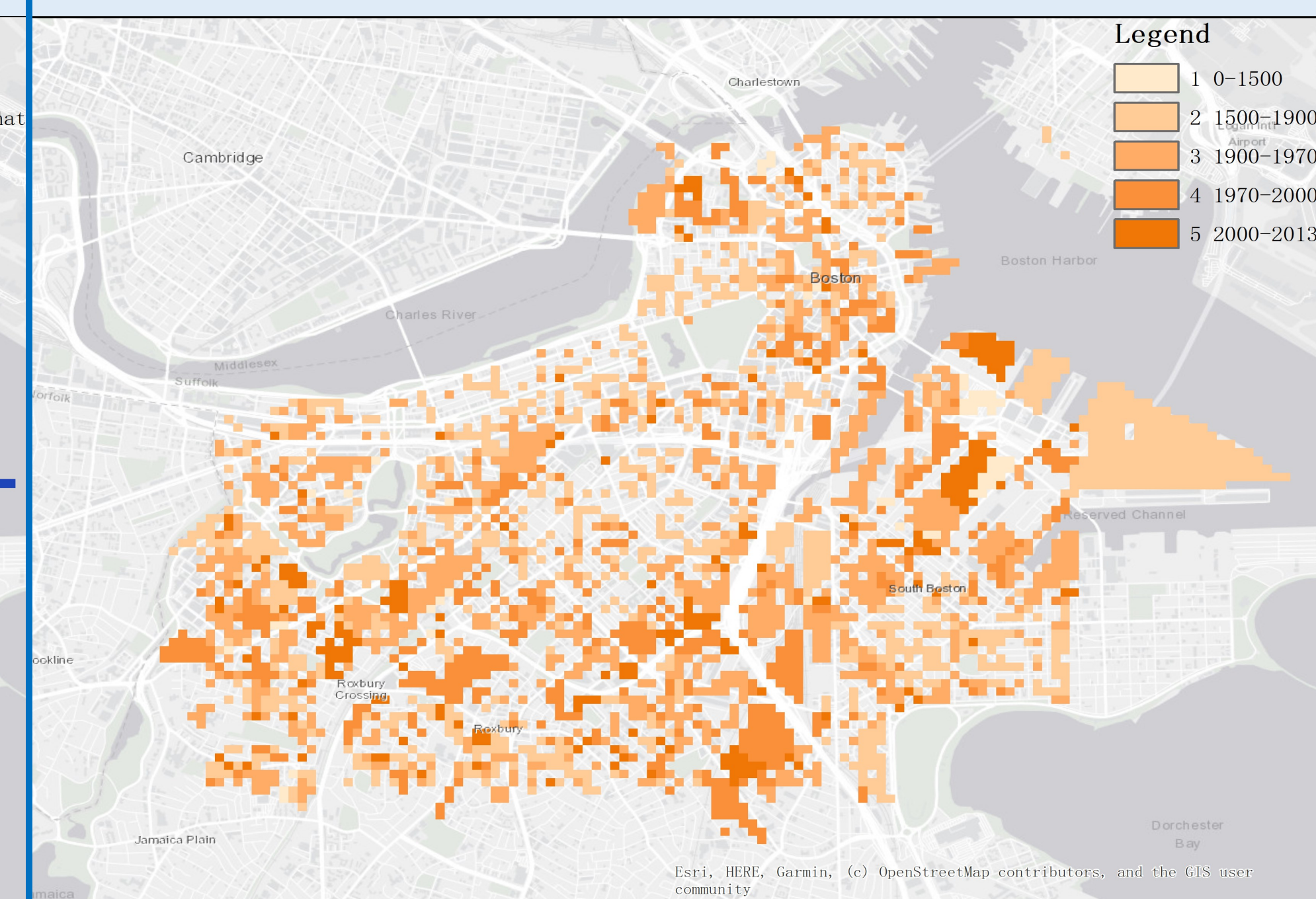
The Distribution of Living Area Size



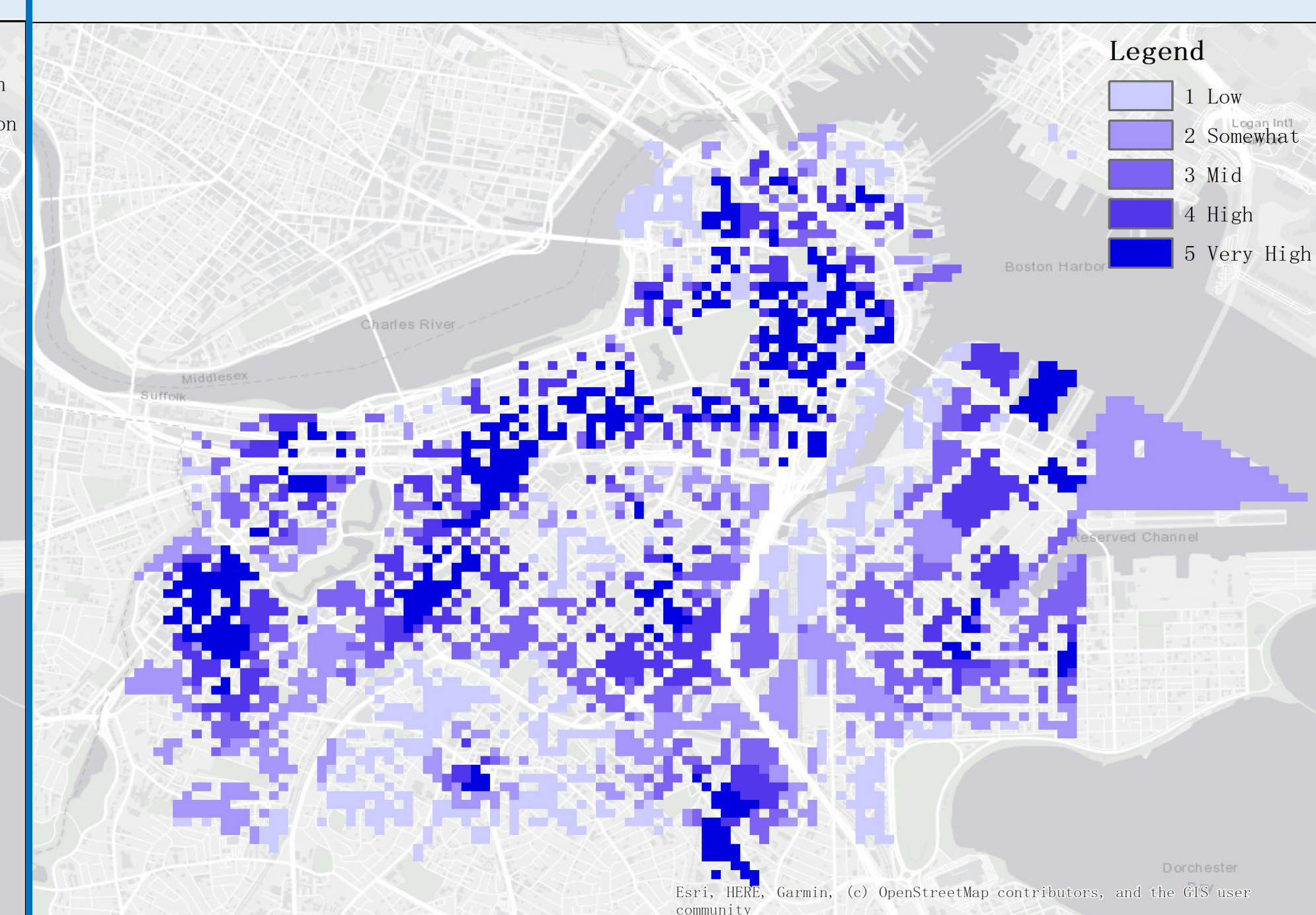
The Location of Undervalued Houses



The Distribution of House Built Year



The Distribution of Bank Attraction



Method:

The key method used in this poster is raster calculation. Since the data is stored in parcel format, transferring them into raster files will be the first step to any further analysis. Second step will be choosing some features that might be relevant to investment decision. As a result, there are four features selected by this poster.

First feature is the size of living area of the house. The living area size is large around most of the buildings around university and college. This variable can show that the function of the house. Second, the clustering condition of the price level. One under-valued house must be a low-value house surrounded other high value houses. This condition is the most important one. Since the price level is measured by unit value on the land, it shows the density of building in the area. Third feature is the built year of the house, the later the better. Lastly, the bank attraction. It is measured by the sum of deposit divided by distance to the closest bank from each parcel. This condition shows how good the economic condition the near neighborhood is.

Results and Conclusion:

After getting these four raster layers, they are weighted as 0.05, 0.5, 0.3, 0.15, respectively. So, the final score is ranged from 1 to 5, the higher the better. The living area is less important, because finding a location is more important than the current function of the house. As for bank attraction, it is less important the build year because a new building can reduce potential investment cost. The final map shows the distribution of estimated score for the houses in the Boston Down areas. The results shows that the areas at the Southern Harvard Medical School and the area at the Eastern Boston Medical School are under-valued, comparing to its surrounding areas. However these locations are either university facility or parking areas. There is one store on the **E Broadway** which fits all conditions. It is highlighted by red circle in the left satellite image.

Project Information and Reference

All maps are displayed on 1:40,000 scale.
 Project Information: NAD 1983 State Plane Massachusetts Mainland FIPS 2001 feet.
 Datum: D_North_American_1983.
 Data Source: Tufts M drive and Federal Deposit Insurance Corporation (FDIC) and Google Map Satellite image.