This poster visually depicts the change in population in Boston from 1940 to 2010 using the dot density method, where one dot represents one person. Coding people by census race classifications, patterns emerge that illuminate history and legislation and perhaps point towards what Boston will look like in the future.

The maps from the 1940’s and 1950’s show Boston as a city of strong racial boundaries and a dense urban core. As we move into the 1960’s and 1970’s there is a steady decline in overall population and white population as well as a de-densification of the urban core and growth of the black population. The maps of 1980 through 2010 show dispersion and growth in the black and Asian communities, growing diversity, and a slow increase in overall population. With the recent influx of people moving into Boston, the historic communities that have been here are facing economic pressures that may make it hard for them to stay.

A study by the Brookings Institute recently found that Boston has the highest income inequality of any major city in the country. As Boston faces stagnant wages and soaring housing prices, I juxtapose historic trends with 2014 data on household income and home value. The serious threat of gentrification may result in another drastic population shift, as many people are priced out of neighborhoods that they have lived in for generations.

Methodology
To look at population shift through time, I used historic census tracts and block groups available from the National Historical Geographic Information System. I joined those tracts with racial demographic information gathered from corresponding census years, available from Social Explorer. Using the ‘race’ categories that the census employs, the four categories used for this poster are: White, Black, Asian and Other. Asian includes Pacific Islander, other includes the categories American Indian, Hawaiian Native, Multi race and other. Median home value and median household income are shown at the block group level using census data from the American Community Survey’s 2014 5 year estimates.

Limitations
Due to availability, not all of the data was gathered at the census tract level. In the majority of the years, the data are shown by census tract. However, for 1990 and 2000 the data are by census block group, since the demographic information was not available at the tract level. Another complication is that the historic data and Social Explorer data is only compatible from 1940 through 1970. Starting in 1980 the GIS join fields are different between the two sets of data, so other methods of collecting the information were required. As a result, 1980 data was gathered from NHGIS and 1990 and 2000 were gathered from MASS GIS. The dots for each person are shown randomly within the census tract or block group, not necessarily in relation to where people actually live in that area. Finally, there is the limitation of how census data is collected and categorized, most notably the fact that Asian is not an option on the census until 1980.