

Final Project Report

The Asian American Dream?

Income, Education, and Inequality Among Asian Americans in Boston

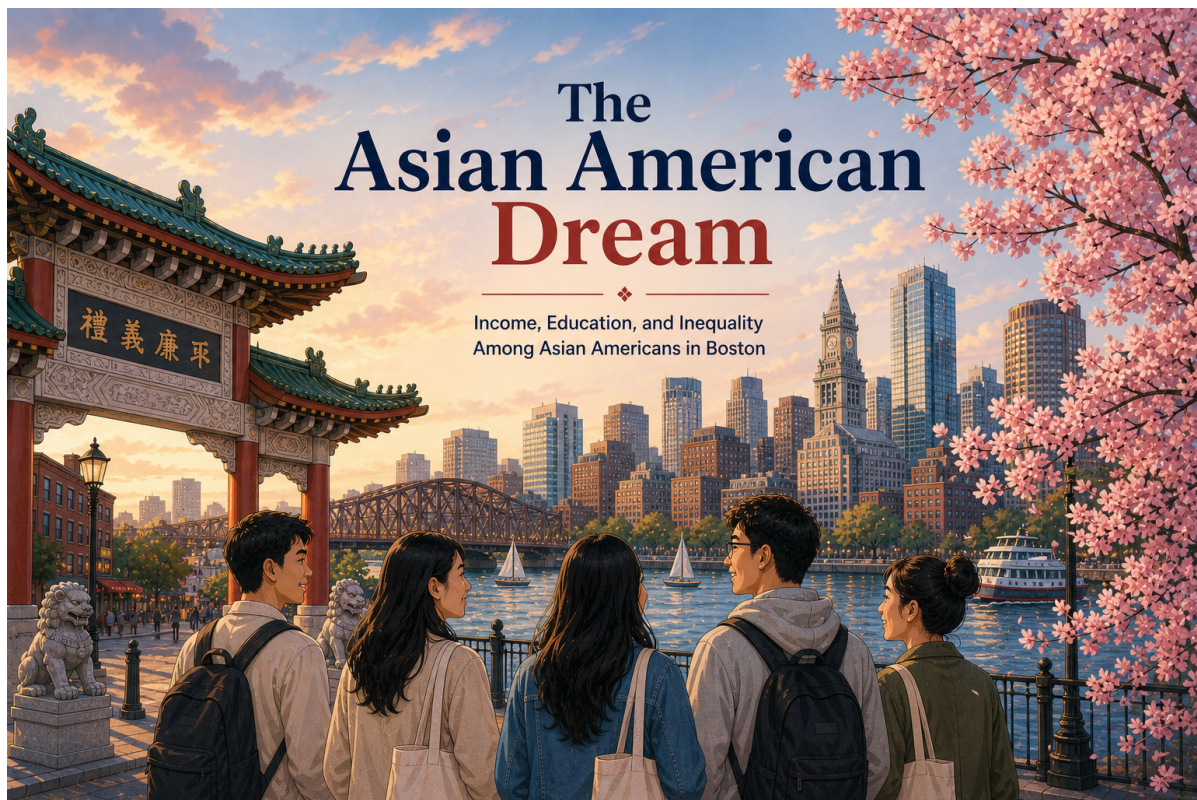


Image generated by ChatGPT

Updated May 11, 2026

Description

Introduction:

Asian Americans are often viewed through the lens of the “model minority” stereotype, which portrays Asian communities as universally successful in education and income. However, there can be big differences between Asian American subgroups and their lived experiences. This project aims to explore income, educational attainment, and inequality among Asian American communities in Greater Boston using demographic data visualizations. Through interactive charts, this project will highlight how different Asian ethnic groups experience economic opportunity and educational mobility differently.

Motivation:

As an Asian American student living near Boston, I have often seen Asian Americans represented as a single successful group in media and education. I was interested in learning more about how different Asian communities may experience opportunity and inequality differently. While some groups may have high average incomes and educational attainment, others may face economic hardship, language barriers, or higher poverty rates that are often overlooked. With my own parents being immigrants from China, I wanted to do more research and learn a little more about the specifics regarding these areas.

Final Description:

This project explores the diversity and inequality that exist within Boston’s Asian American population through a series of interactive and story-driven data visualizations. Asian Americans are often viewed as a single, uniformly successful group under the “model minority” stereotype, but this perception can hide significant differences between Asian subgroups. This project first puts into perspective the Asian/Asian American population in Boston by demographics, then examines how experiences vary across communities such as Chinese, Indian, Vietnamese, Korean, Filipino, and Japanese Americans living in Boston. The goal of this project is to see the importance of deeper analysis when discussing race, opportunity, and economic mobility in Boston.

Datasets

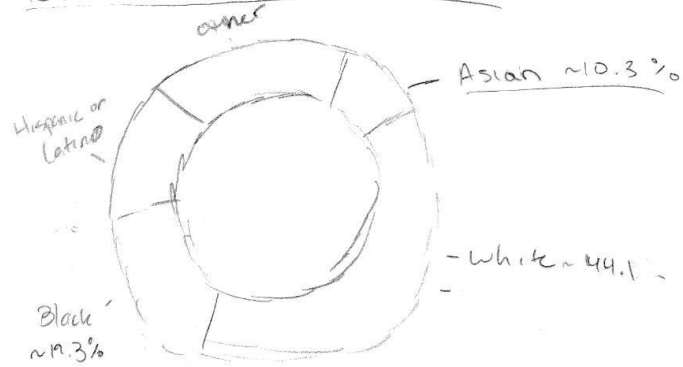
Main Data sources:

- Boston Demographics
 - <https://www.census.gov/quickfacts/fact/table/bostoncitymassachusetts/PST045224>
- Asian Population Subgroups
 - <https://data.census.gov/table/ACSDP1Y2024.DP05?g=160XX00US2507000>
- Median Household Income
 - [https://data.census.gov/table/ACSDT5YSPT2021.B19013?t=-04:Income+\(Households,+Families,+Individuals\)&g=160XX00US2507000&tp=true](https://data.census.gov/table/ACSDT5YSPT2021.B19013?t=-04:Income+(Households,+Families,+Individuals)&g=160XX00US2507000&tp=true)
- Educational Attainment
 - <https://www.bostonindicators.org/reports/report-website-pages/changing-faces-of-greater-boston/explore-the-data>
- Poverty Status Percentage
 - <https://data.census.gov/table/ACSDT5YSPT2021.B17001?t=-04:Poverty&g=160XX00US2507000>

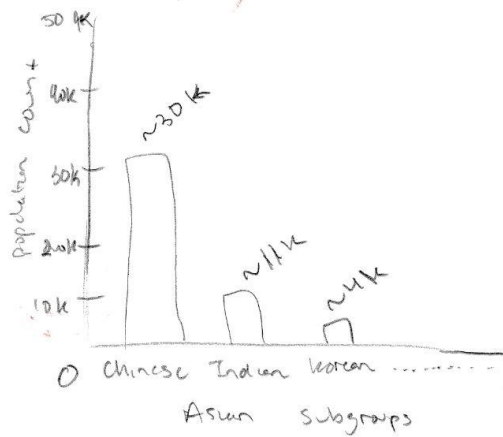
Paper Sketches and Prototypes

Visualization Sketches

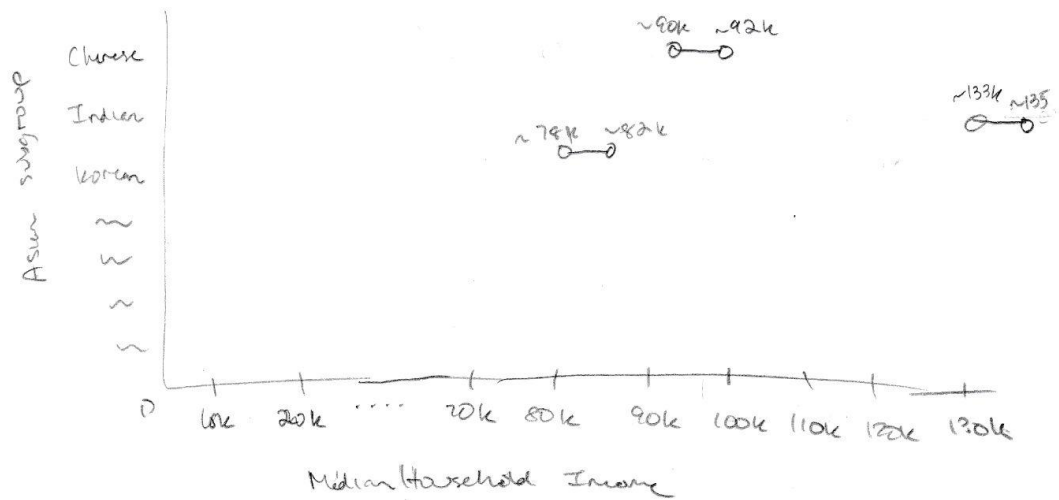
Boston Demographics



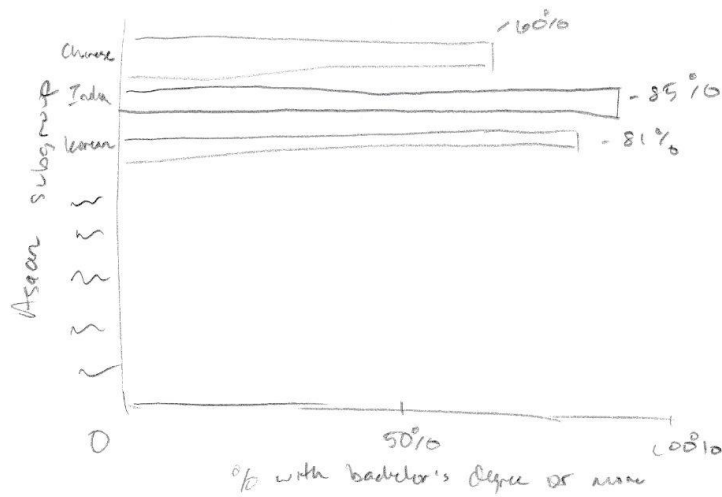
Asian subgroup population



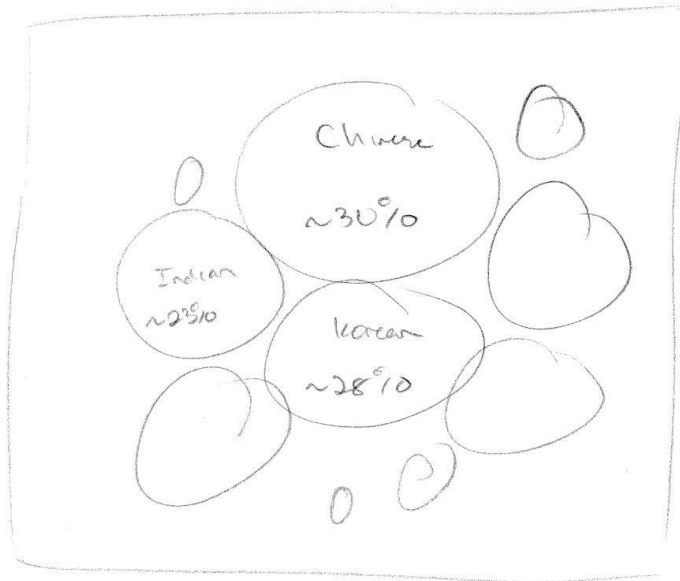
Median Household Income



Educational attainment



Poverty Rates
(Bubble chart)



shows % of subgroup that is
below the poverty level

Technologies, Development and Deployment

Visualization/Website:

D3, Vegalite (Data Visualizations)

HTML, CSS, Javascript (Webpage)

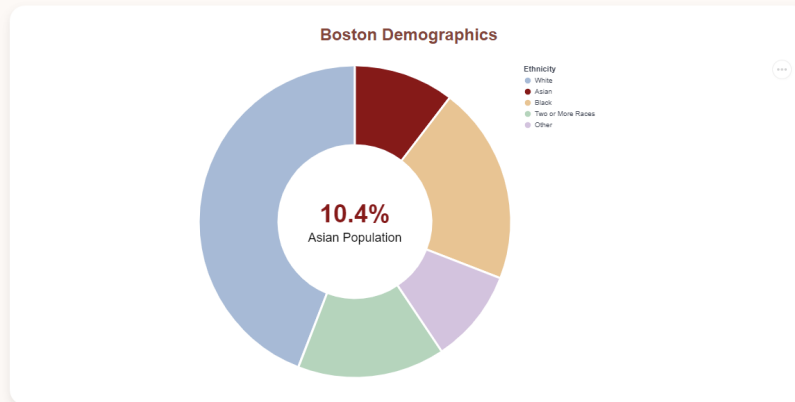
Github Pages (Hosting)

Final Product



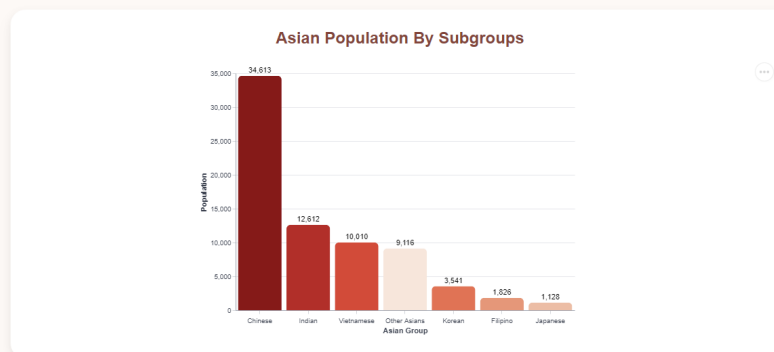
This is what pops up as soon as we enter the site, the title as well as the little introduction picture that was generated by ChatGPT, that includes the Boston Skyline and the Chinatown Gate.

Of Boston's population of almost ~670k people, Asian Americans make up 10.4% of the city's population. That is ~72k people, but this number alone does not tell the full story. Looking at Asian Americans as one single group can hide major differences in population size, income, education, and poverty.

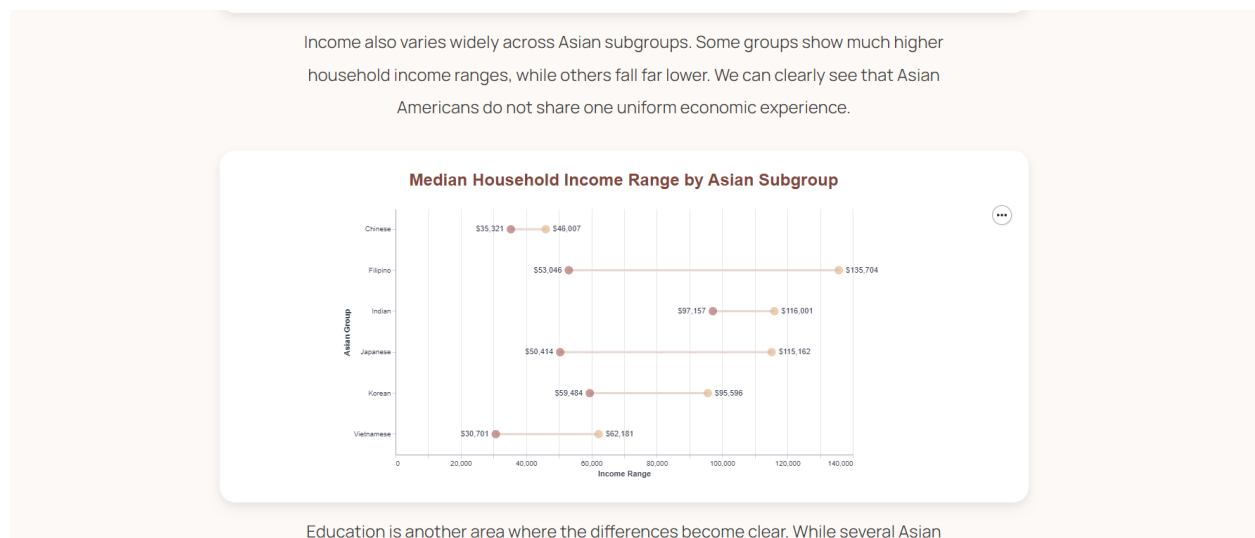


The first visualization introduces Boston's overall demographic composition and highlights the Asian American population within the city. This gives background and context of the story at hand. Although Asian Americans make up only around 10.4% of Boston's population, this still represents tens of thousands of residents. I chose a donut chart because it allows viewers to quickly compare the proportion of each racial group while maintaining a clean and readable layout. The Asian category is highlighted in red to immediately draw the audience's attention to the focus of the project. You can also hover over the donut to see more specific percentages (rest of charts can also be hovered over, but just another reiteration of data shown).

Within Boston's Asian population, the largest subgroup is Chinese residents, followed by Indian and Vietnamese residents. These differences matter because larger and smaller communities may experience Boston differently, especially when it comes to access to resources, education, and economic opportunity.

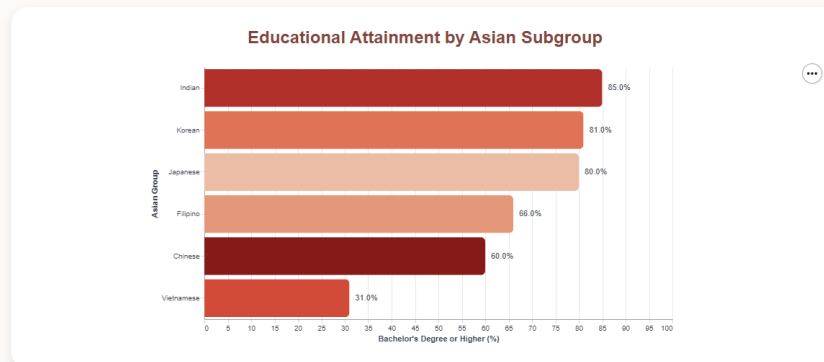


After establishing the Asian American population within Boston, the next visualization breaks this population down into individual Asian subgroups. This is important because Asian Americans are frequently discussed as one unified demographic despite having highly different migration histories, economic backgrounds, and social experiences. The bar chart clearly shows that the Chinese population represents the largest subgroup in Boston, while several other communities are much smaller in comparison. I tried to utilize a range of reddish colors to follow along with the donut chart. Red is also an important color in many Asian cultures so it fits the theme.



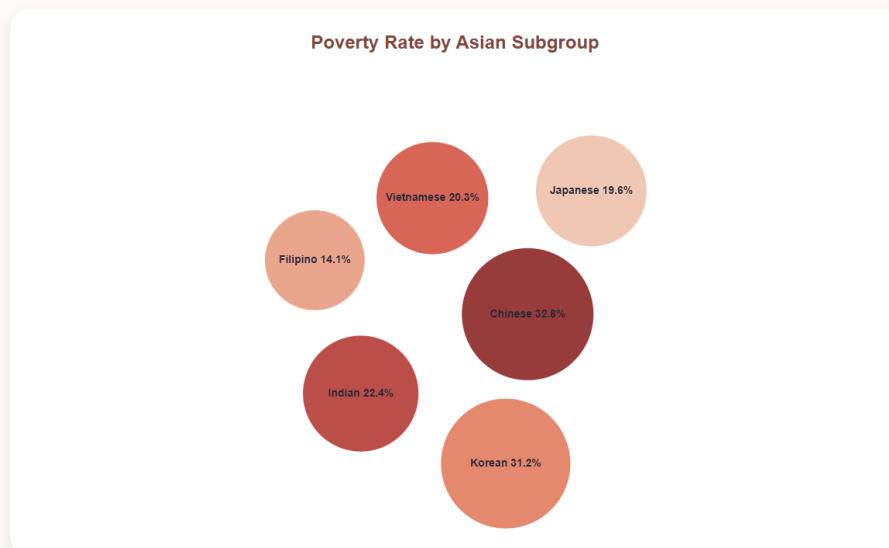
The next visualization starts to compare different Asian subgroups, specifically the lower and upper ranges of median household income. I chose a dumbbell chart because it allows viewers to immediately see both the spread and disparity of income levels within each community. The chart reveals significant differences between subgroups. While some Asian communities have relatively high household incomes, others fall substantially lower.

Education is another area where the differences become clear. While several Asian subgroups have high rates of bachelor's degree attainment, others have much lower rates.



The next visualization compares the percentage that have attained bachelor degrees or higher. Education is often used to support the “model minority” stereotype associated with Asian Americans. However, this demonstrates that educational attainment also varies significantly between Asian subgroups. I used a horizontal bar chart because it allows the percentage values and subgroup comparisons to remain easy to read. The chart shows that while several subgroups have high rates of bachelor's degree attainment, others remain much lower, emphasizing the importance of subgroup-level analysis instead of broad racial aggregation.

Poverty rates reveal one of the most important parts of the story. Even when some Asian subgroups show high income or education levels, other groups still have a large portion who are below the official poverty level.



The final visualization focuses on poverty rates among Asian subgroups in Boston. I chose a bubble chart because it creates a more visually engaging representation of percentage differences while emphasizing the relative scale of poverty between groups. This chart is one of the most important parts of the project because it reveals that some Asian communities experience disproportionately high poverty rates despite the broader stereotype of universal Asian economic success.



Overall, these charts show that the “model minority” stereotype does not reflect the full reality of Asian Americans in Boston. While some communities may appear to achieve the American Dream, the data shows that opportunity, income, education, and stability do not reach every subgroup equally.

Finally, I added a small conclusion at the end of the website/story that reiterates how Asian Americans in Boston cannot be understood as a single group. While stereotypical stories tell of educational and economic success, deeper analysis reveals major disparities in income, education, and poverty. The “model minority” stereotype often hides these inequalities by presenting Asian Americans as uniformly successful. However, the data shows that that is not entirely true.

Website Link: <https://nickchen0231.github.io/CS617-Final-Project--Boston-Storytelling/>
Github Repo: <https://github.com/NickChen0231/CS617-Final-Project--Boston-Storytelling>

References

https://data.census.gov/profile/Boston_city,_Massachusetts?q=160XX00US2507000#race-and-ethnicity

<https://www.bostonindicators.org/reports/report-website-pages/changing-faces-of-greater-boston/explore-the-data>

https://scholarworks.umb.edu/iaas_pubs/48/

<https://www.massapiscan.org/apia-survey>

<https://aapidata.com/data/by-the-numbers-education/>

<https://vega.github.io/vega-lite/examples/>

<https://d3-graph-gallery.com/>

ChatGPT - Image Generation and formatting for the website, lots of help formatting :)