



Davina Wolfe

Final Project Report

Priced Out Of Boston: Rising Rents and Displacement

Abstract: Boston's housing market has become one of the most expensive in the country, driven by a surge in demand from students, young professionals, and tech workers, against a backdrop of constrained housing supply. This project, Priced Out of Boston, is a web based scroll telling data story that uses real census tract level data from the 2023 American Community Survey, MBTA transit data, and eviction research from MIT and City Life/Vida Urbana to explore the relationship between rent, income, race, and displacement across Boston neighborhoods. The story is structured in three chapters: the rise of rents across the city, the income squeeze that leaves Black and Latino households most cost burdened, and the eviction fallout that follows. The final product is an interactive, single page HTML application built with D3.js and Scrollama that allows users to hover, click, and explore each neighborhood's full data profile.



Description

Boston has a housing problem, and it has been building for years. The median gross rent in Suffolk County hit \$2,069 per month in 2023, up from \$1,590 in 2019. That is a 30% increase in four years, during a period when wages for most workers grew at a fraction of that pace. But the raw number does not tell you much on its own. The real story is about where those rents are highest, who lives there, who gets pushed out, and where they go.

This project started from a simple question: can you show, with data that is publicly available and honest about its limits, that housing unaffordability in Boston is not just a market problem but a racial equity problem? The answer the data gives is yes, clearly and pretty consistently.

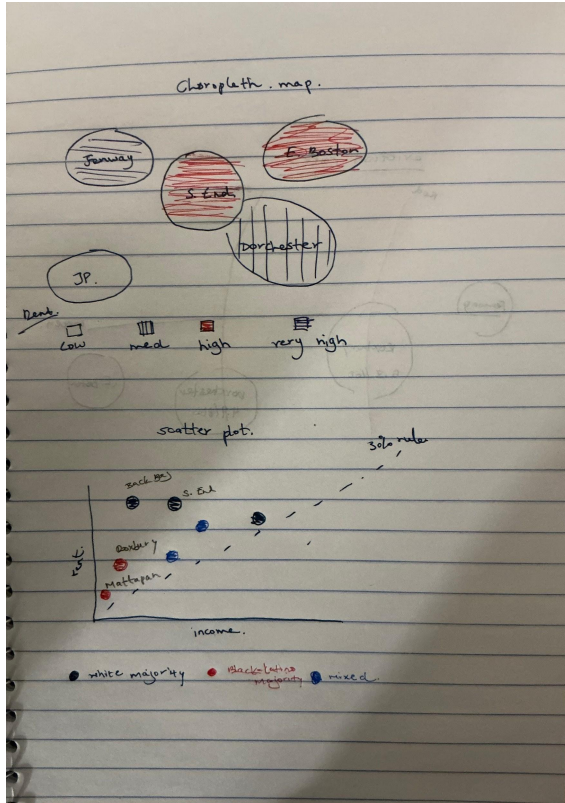
The final product is a three chapter scroll telling web story called Priced Out of Boston. Chapter one maps median rent by neighborhood using ACS 2023 data and overlays MBTA transit stations to show how the most expensive neighborhoods cluster along transit corridors. Chapter two plots rent against household income and shows that Black and Latino majority neighborhoods carry the highest rent burden as a percentage of income, even though their absolute rents are lower. Chapter three draws on eviction filing data from MIT researchers and City Life to show that eviction rates in Roxbury and Mattapan are six to seven times higher than

in wealthier neighborhoods, and that the Fairmount commuter rail corridor connects the most vulnerable communities while offering some of the least frequent service in the system.

Datasets

The project uses five data sources, all publicly available. Rent data comes from ACS 5 Year 2023 Table B25064, downloaded at the census tract level for Suffolk County, yielding 216 tracts that were grouped into 15 neighborhoods. Income comes from ACS Table B19013 at the same tract level. From these two, a rent burden percentage was calculated for each neighborhood annual rent divided by median household income with 30% being the standard cost burden threshold. Demographic data comes from ACS Table B03002, which separates nonHispanic white, nonHispanic Black, nonHispanic Asian, and Hispanic or Latino populations. A neighborhood was labeled by majority group if one group exceeded 35% of the population, otherwise mixed. Transit data comes from the MBTA GTFS feed from May 2026, with rapid transit stations mapped to their lines and the Fairmount corridor included separately given its relevance to the displacement story. Eviction data comes from Robinson and Steil's 2020 MIT report, which analyzed all market rate eviction filings in Boston Housing Court from 2014 to 2016. Because this predates the ACS data by several years, it is used to show structural patterns rather than current conditions. All wrangling was done in Python. The wideformat Census CSVs were parsed by iterating over column headers to extract tract IDs and estimate values, with suppressed values and margin of error columns filtered out. The cleaned data was embedded directly into the HTML file as a JavaScript object so the site runs without a server.

Paper Sketches and Prototypes



Technologies, Development and Deployment

My project is a single HTML file with all JavaScript, CSS, and data embedded inline. This made it easy to share and host without any build system or dependencies. D3.js 7.8.5 handles all visualizations the maps use a custom projection function to convert lat/lon to SVG coordinates, the scatter plot uses linear scales with a path generator for the affordability threshold line, and the bar chart uses a band scale with click events that open a neighborhood detail card. Scrollama 3.2.0 drives the scrollytelling, firing callbacks as each narrative step hits 50% of the viewport and toggling an active class that fades the text in while charts stay fixed with CSS sticky positioning. Tooltips follow the mouse and show rent, income, burden, and demographic data for neighborhoods and line info for MBTA stations. Fonts are loaded from Google Fonts and the project is hosted on GitHub Pages.

Final Product

The live project can be accessed at: <https://davwolfe.github.io/priced-out-boston/>. The source code is available at: <https://github.com/davwolfe/priced-out-boston>.

The final product is a scrollytelling web page divided into a hero section, an introduction, and three chapters, each with a sticky visualization and a scrollable narrative panel.

The hero section opens with a dark background, a stylized Boston skyline illustration, and a rising red trend line that visually summarizes the story before any text is read. Four key statistics are displayed: the Suffolk County median rent of \$2,069, the Fenway median of \$3,247, the Roxbury median of \$1,186, and the finding that 37% of evictions occur in majority Black neighborhoods.

Chapter one, titled The Rise, presents a neighborhood bubble map where each neighborhood is represented as a circle positioned at its geographic center, colored by median rent from pale pink under \$1,500 to deep red over \$3,000. MBTA stations are plotted as small colored dots on top of the map, with each dot colored by its transit line. The three scrollable steps guide the reader from the overall picture, to the observation that the most expensive neighborhoods cluster along transit lines, to the contrast between Fenway and Roxbury at opposite ends of the rent spectrum. Hovering on any neighborhood shows a tooltip with rent, income, burden, and demographic breakdown.

Between chapters one and two, a standalone interactive bar chart lets users explore all 15 neighborhoods ranked by median rent. Clicking any bar opens a detail card below the chart that describes the neighborhood in plain language, including its rent burden, demographic composition, and eviction filing rate.

Chapter two, titled The Squeeze, shows a scatter plot with median household income on the x-axis and median monthly rent on the y-axis. A dashed red line represents the 30% affordability threshold. Dots above and to the left of this line represent cost-burdened neighborhoods, each colored by the majority demographic. The three scrollable steps explain the 30% rule, identify Roxbury and Dorchester as the most burdened neighborhoods despite lower absolute rents, and connect the clustering of Black and Latino majority neighborhoods in the high-burden zone to decades of discriminatory housing policy.

Chapter three, titled The Fallout, shows a second bubble map where circle size grows with eviction rate and color deepens as the rate increases. Only the Orange Line, Red Line, and Fairmount Line stations are shown, focused on the corridors most relevant to the displacement story. The three steps explain the overall eviction disparity, name the specific rate difference between Roxbury and wealthier neighborhoods, and describe the Fairmount corridor as the geographic thread connecting the most vulnerable communities.

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