

DD4G: VOTING PATTERNS IN BOSTON

Boston City Council



MassMutual

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BACKGROUND



COMMUNITY PARTNER:
City Councilor At-Large
Julia Mejia

City Councilor Julia Mejia ran for office with the promise of expanding civic engagement and participation among the communities historically excluded by elections and government.

OVERVIEW

Interested in voting patterns in the Latine/Latinx community amongst

- eligible voters
- registered voters
- voter turnout
- precinct breakdown
- demographic information (age and gender breakdown)



DATA SOURCES

- Boston Voter File (.tab files)
- Census data (block group/tract level demographics)
- Geographical data (voting precincts & neighborhood shape files; polling stations)



PROJECT GOALS



Finding voting patterns within precincts and looking at gender breakdowns based on party affiliation.



Show changes in eligibility, registration, and voting over time among likely LatinX voters.



Display voting pattern information into an interactive platform.

TOOLS & LIBRARIES



Python

Data analysis &
exploration, interactive
maps, and charts

Libraries : geopandas,
numpy, folium, seaborn,
matplotlib



R

Data analysis &
exploration
Libraries: ggplot2,
dplyr, readxl,
magrittr



Highcharts

Data analysis
& visualization



EXCEL

Data cleaning



Firebase

Website construction &
deployment

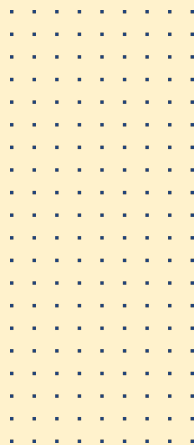


DEMOGRAPHIC VARIABLES

- LALVOTERID
- Voters_Age
- Voters_Gender
- LatinX over age 18
- Precinct
- Ethnic_Description
- Parties_Description
- Voter History over years
- LatinX population change
- Registered Voters
- Voter Turnout

ASSUMPTIONS

- Given "Ethnicity_Description", "Hispanic" corresponds to LatinX
- Considered Blank in "Voters_Gender" as "Not Specified"
- Blank/NULL/NaN values may be ignored in some cases
- We do not have information on who has a felony





DEMO

Interactive Maps

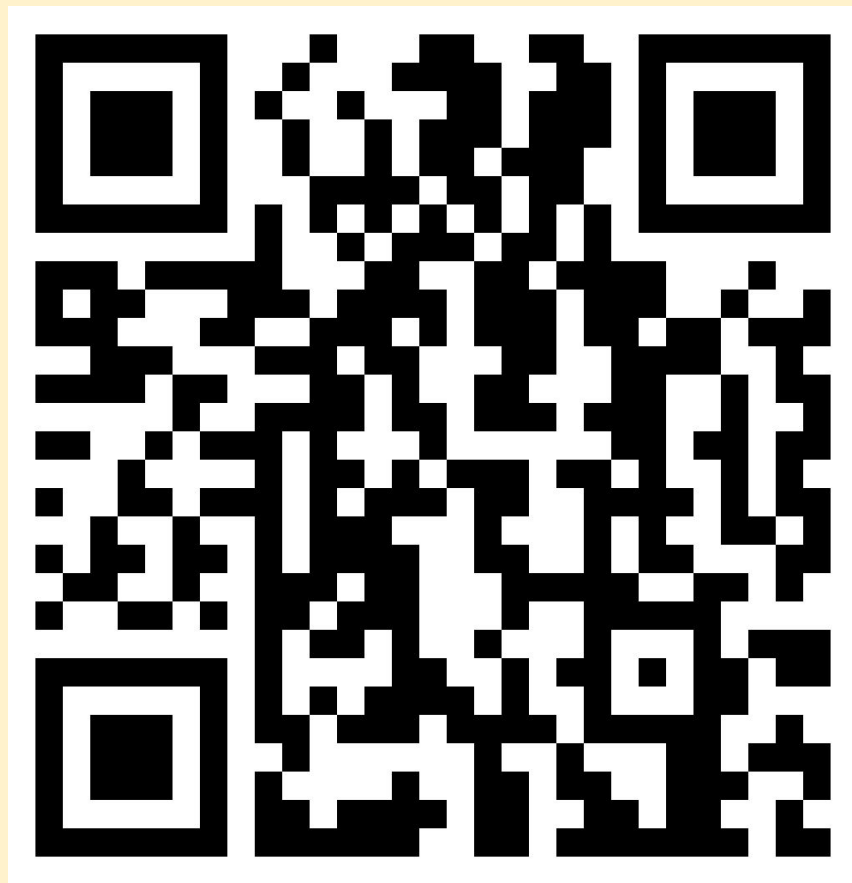
&

Charts

(QR Code Next Slide)

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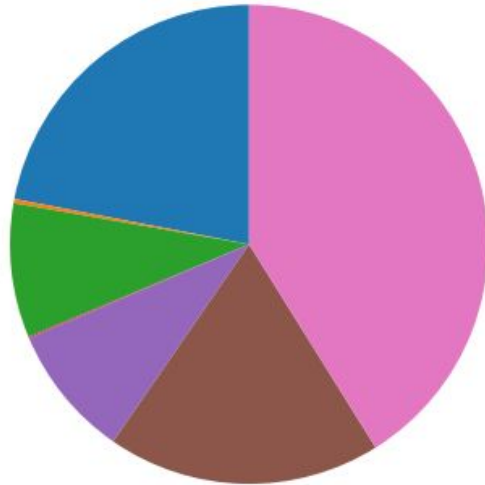
<https://votingpatternsoston.firebaseio.com/>

Boston Population Overview



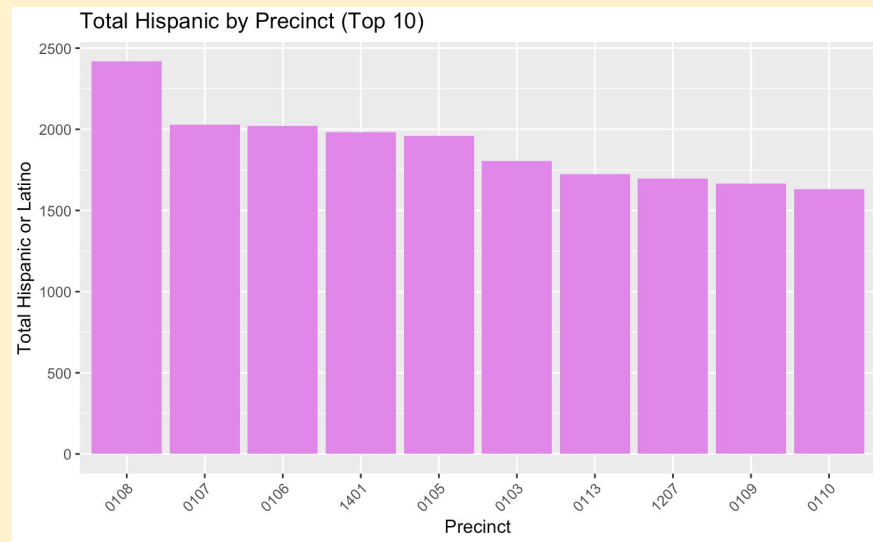
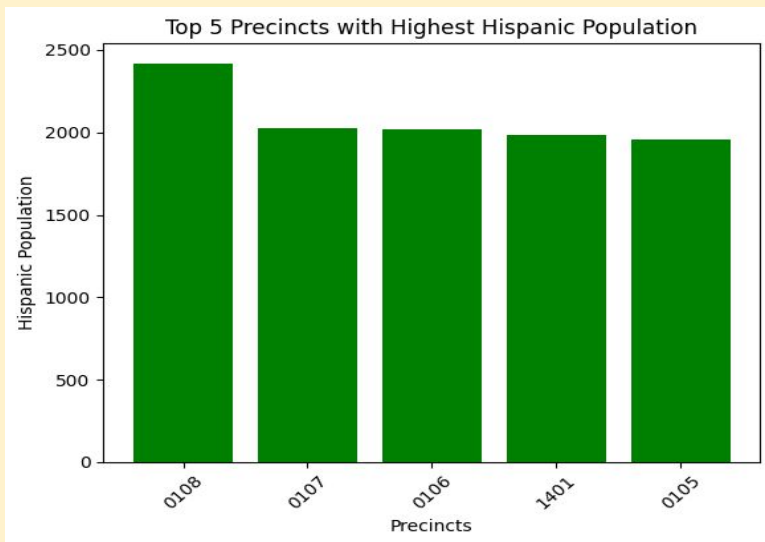
Boston Population Overview

Demographics

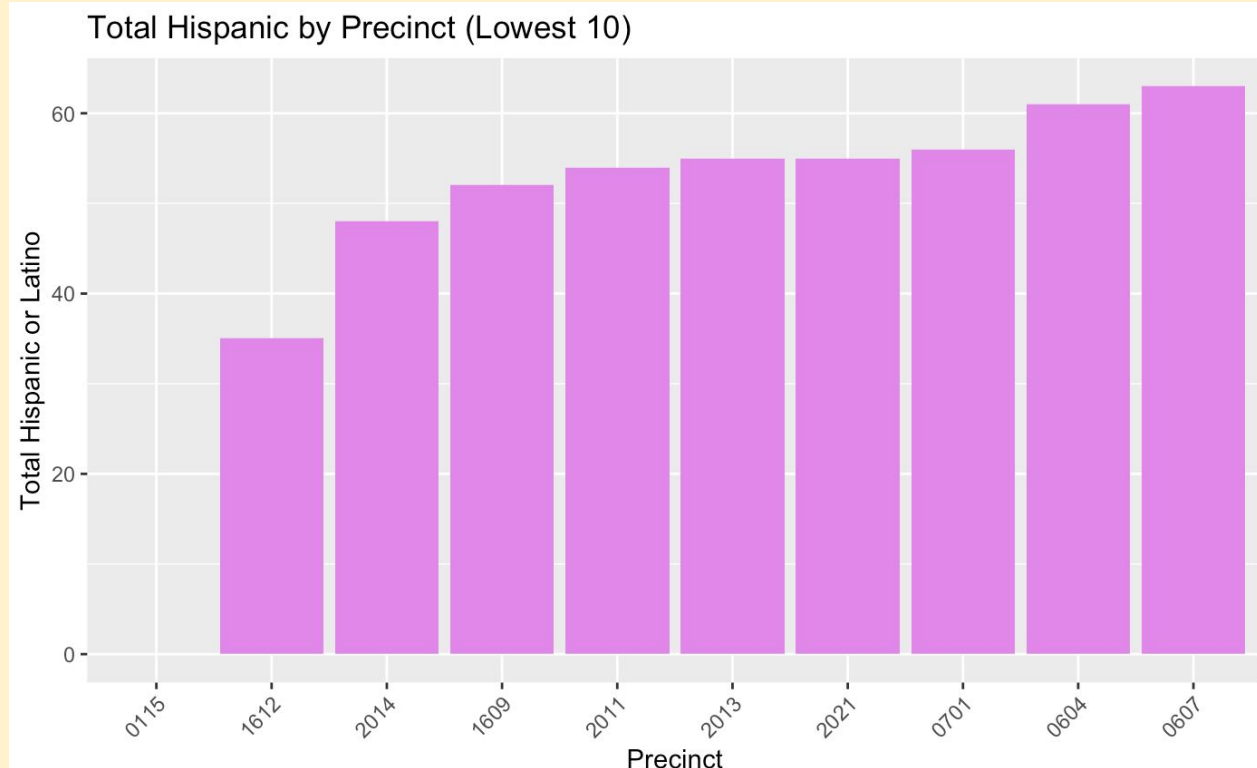


Total Hispanic Population Per Precinct

Precinct with the **most** Hispanic Population are concentrated in **East Boston**.

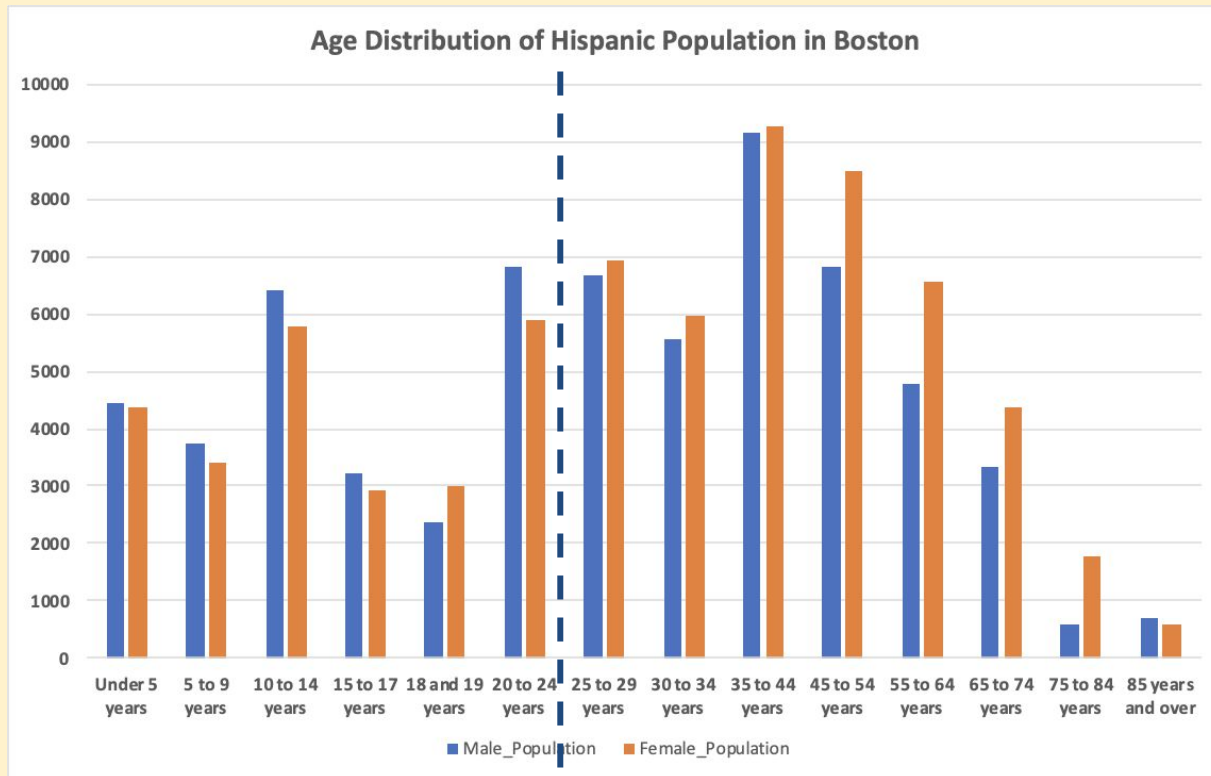


Total Hispanic Population Per Precinct



Precinct with the **fewest** Hispanic Population are concentrated in **South Boston** and **Dorchester**

Hispanic Population Overview



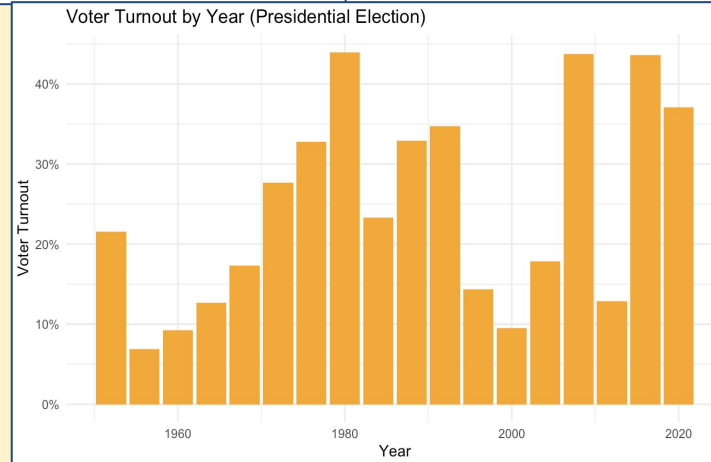
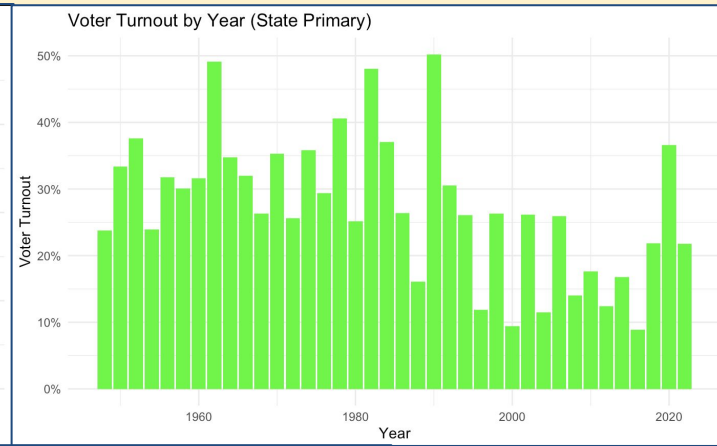
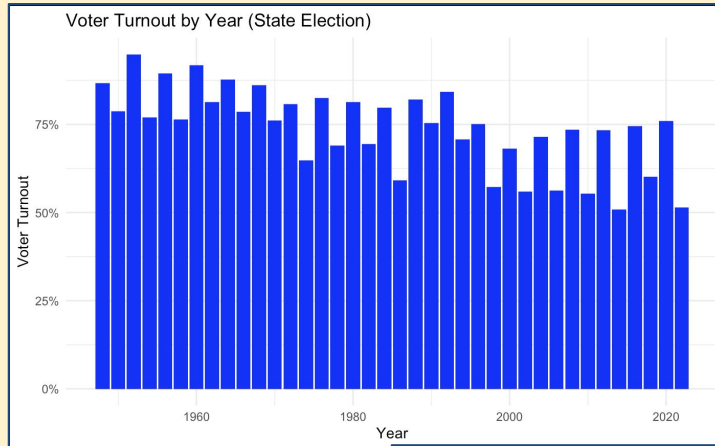
Overall Hispanic population is on the younger side.

There are more female Hispanic population above the voting age.



General Voting Overview

General Voting Turnout



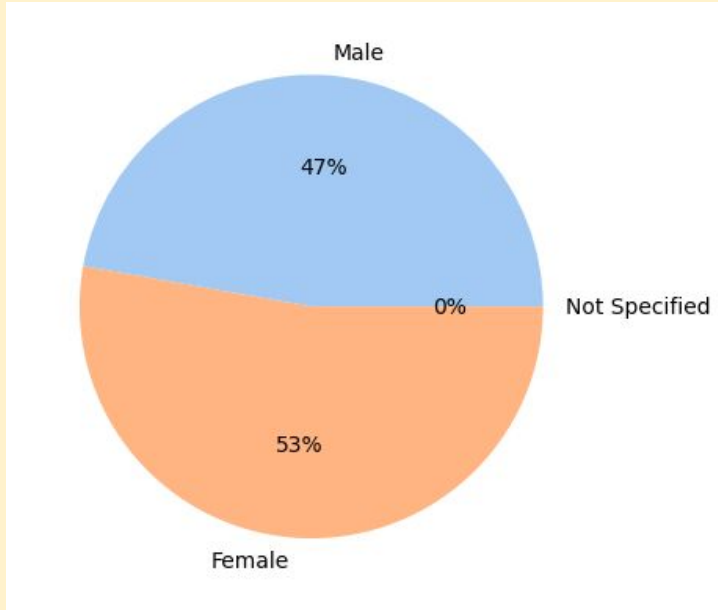


Hispanic Voters Breakdown

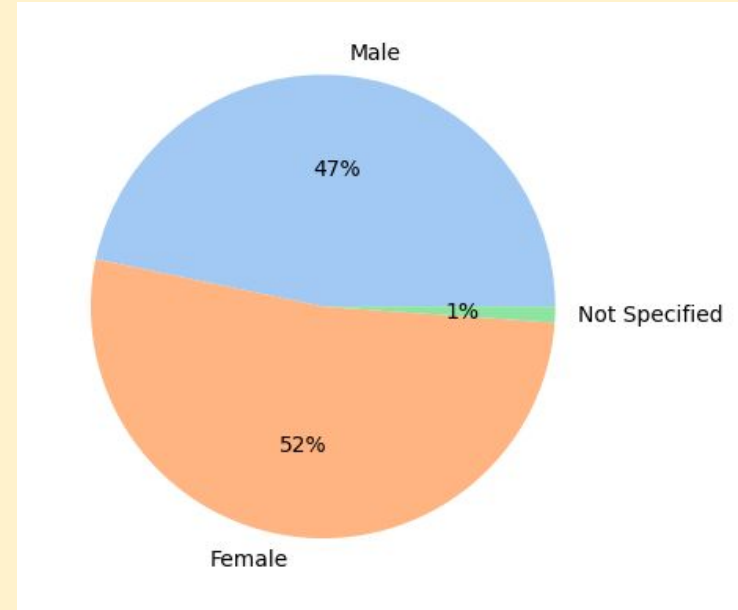


1. Gender Breakdown

Higher proportion of registered voters are **Female** for both the general population and Hispanics/LatinX

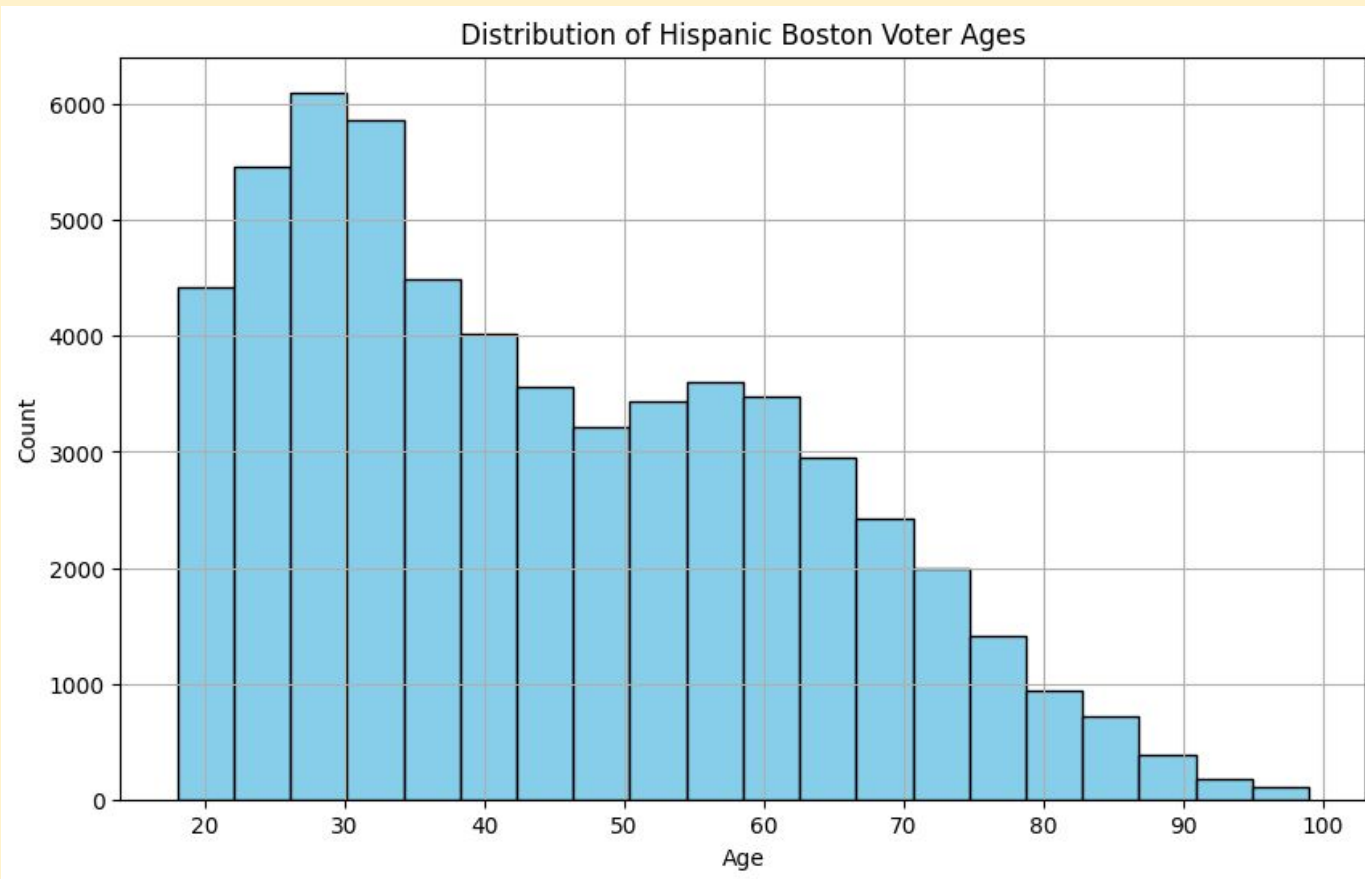


Gender Distribution for Boston Voters



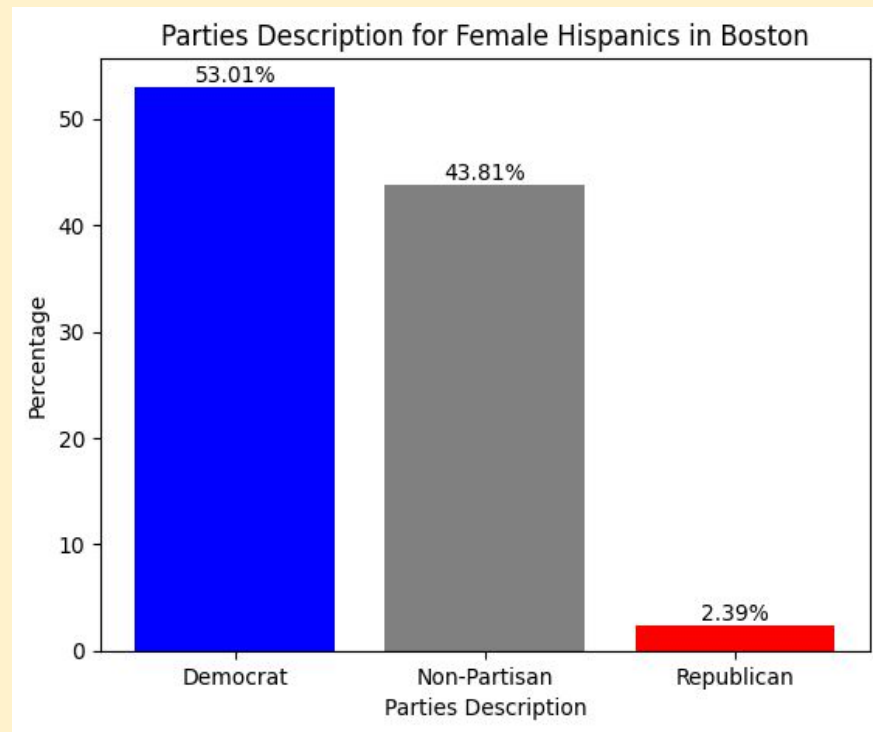
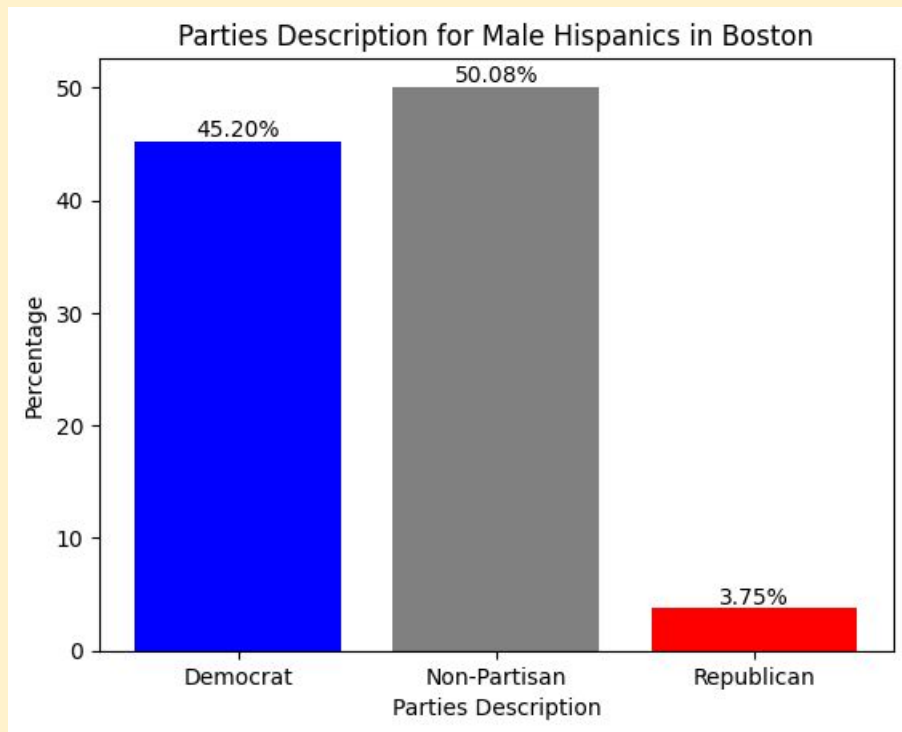
Gender Distribution for Hispanic/LatinX
Boston Voters

2. Age Breakdown

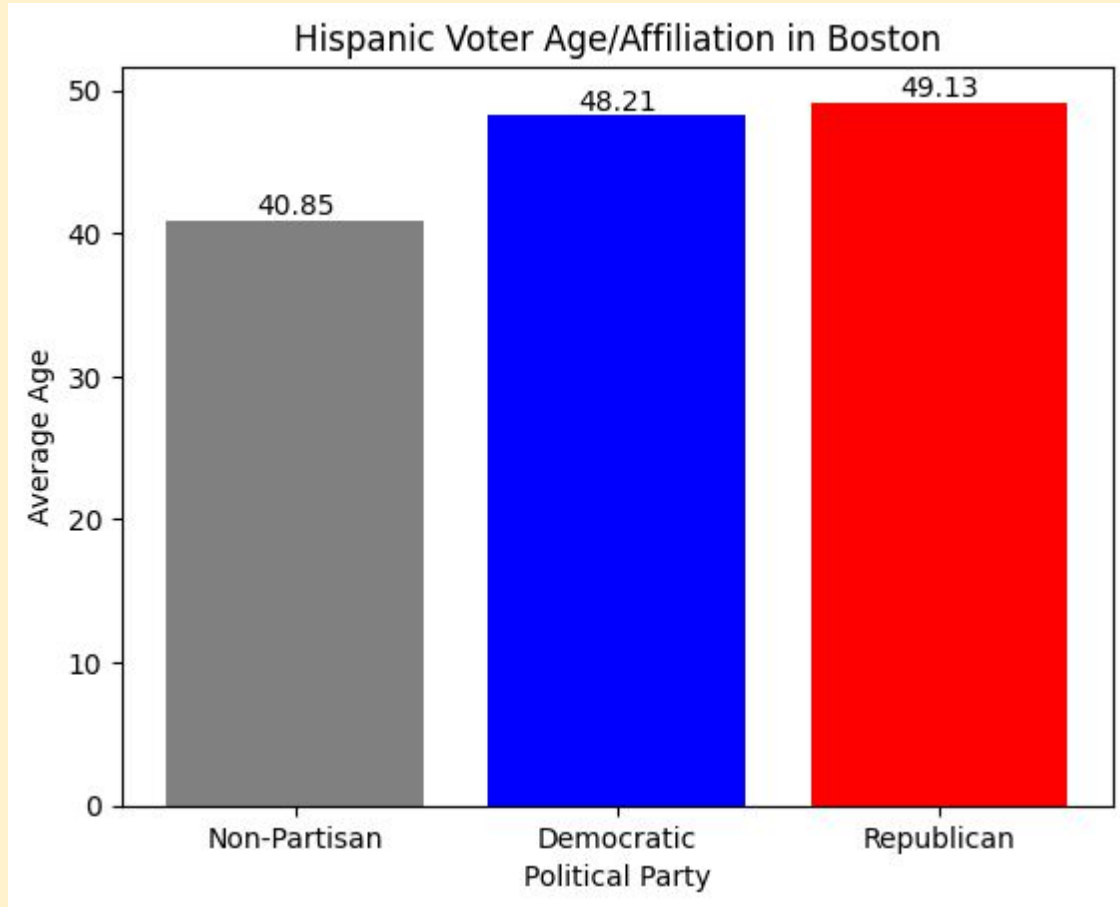


3. Party Affiliation Based on Gender

More females are democratic than males. It may imply that females are more active in political activities.



4. Age and Party Affiliation

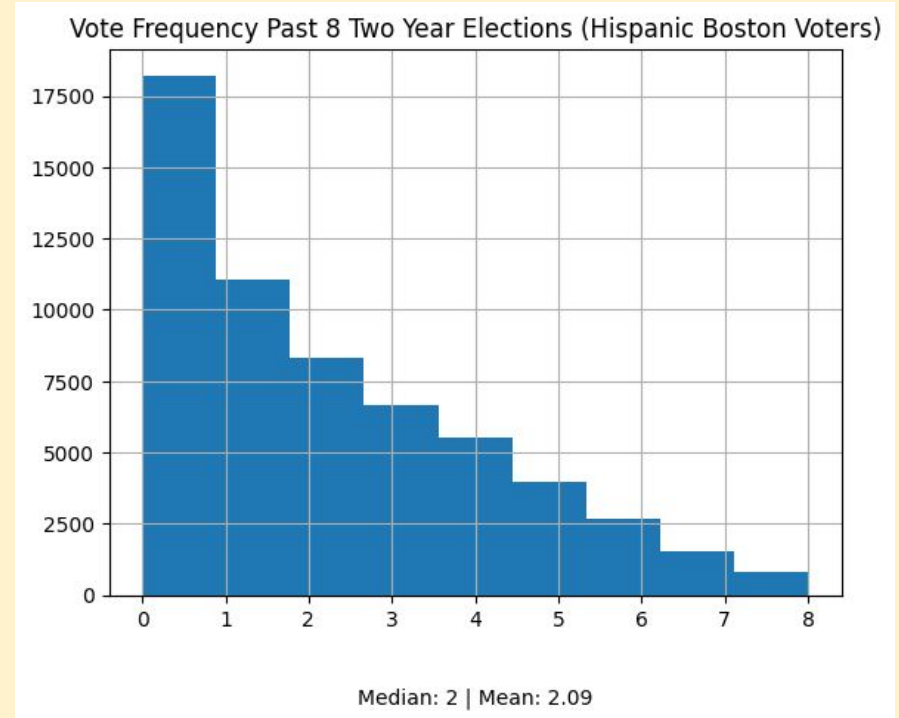
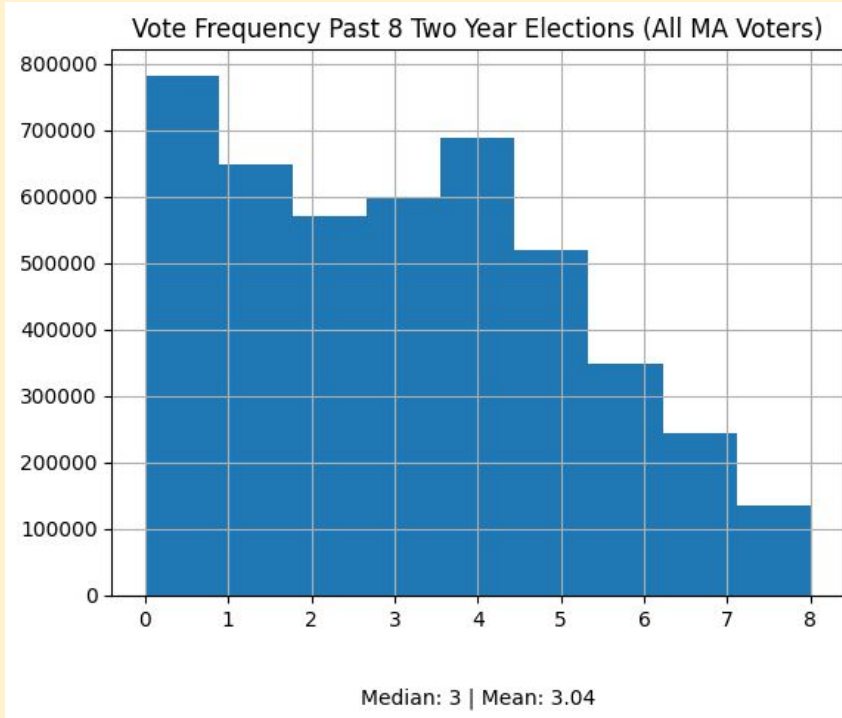


5. Voting Frequency

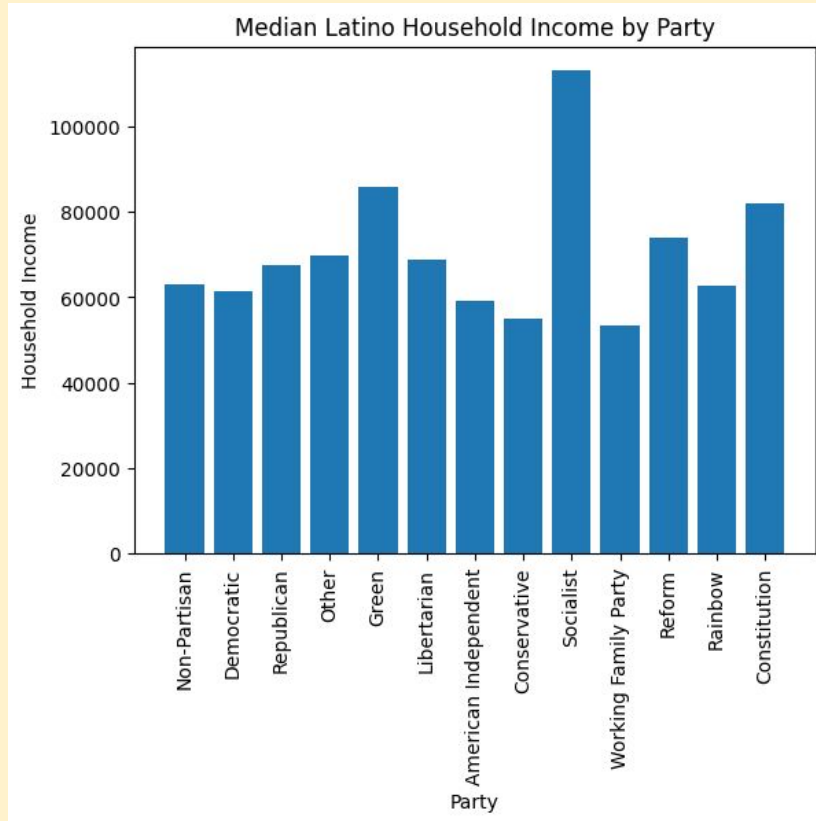
Dates: 11/3/2020, 11/6/2018, 11/8/2016, 11/4/2014, 9/1/2020, 9/4/2018, 9/8/2016, 9/9/2014

Y-axis is count of people who voted x-axis amount of times

Hispanic voters, on average, have participated less than the state average for all Mass voters by about 1 election



6. Hispanic HH Income by Party in Boston





TAKEAWAYS

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Insights

- **Older Hispanic voters** at around retirement age tend to vote more (~60 yrs old)
- **20-30** year old population, and **female** appear to be **more engaged**
- Bulk of population is around **35-60**
- There are **less young people** but a **higher proportion** of voting turnout
- Generally there is a **growing hispanic population** with a higher voter turnout yearly
 - Could be a result of the highly engaged young population
- There are some districts with a high proportion of **non-partisan** voters
 - EX: 0608 has low hispanic population and a high % of non-partisan voters
- **Identify areas for highest impact with the interactive map.**

Road blockers/ Future Scope

- Working with more complete datasets (Government data is challenging...)
- Accounting for latest voter history (Available dataset was not comprehensive)
- Exploration of other demographic variables (Many were incomplete)
- Highlighting possible correlations between variables
- Extending this work to other districts (LatinX community is all around!)



We would like to thank...



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THANK YOU!

We're now open for Questions!

