

Analysis on 2018/2019 State SAT Data

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Problem Statement

“ACT/SAT test score requirement discriminates against low-income, historically disenfranchised minority, and disabled undergraduate applicants”

([Public Counsel](#), 2019)

This project aims to investigate whether or not the above claim is true looking at SAT Data in 2018/2019 and evaluating its correlation with US Household Median Incomes and Population Distribution by Race, to help X University decide on whether they should drop SAT test scores as an admission requirement.

Methodology



Data Gathering

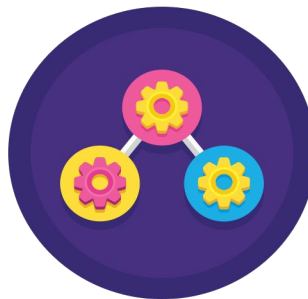
SAT

**Household Median
Income**

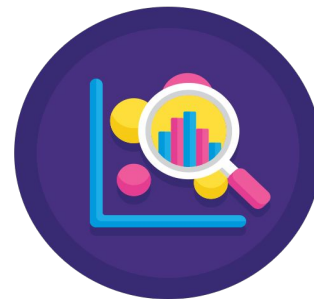
**Population
Distribution**



Data Cleaning



**Data
Exploration**



**Data
Visualization**

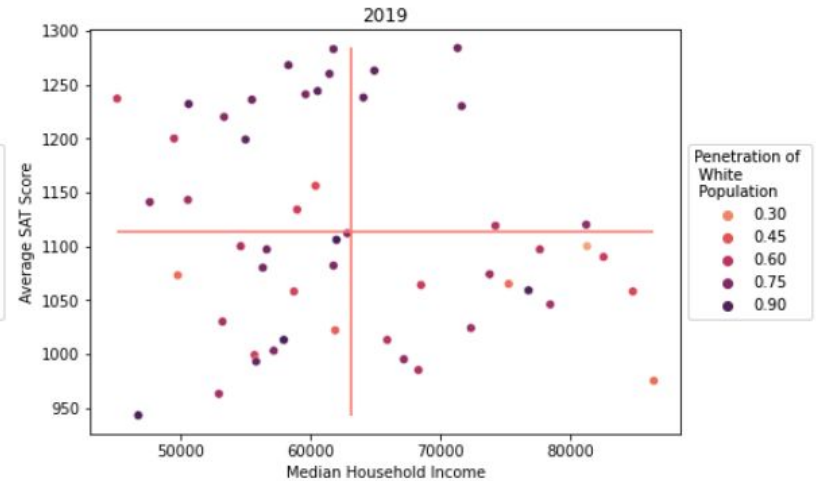
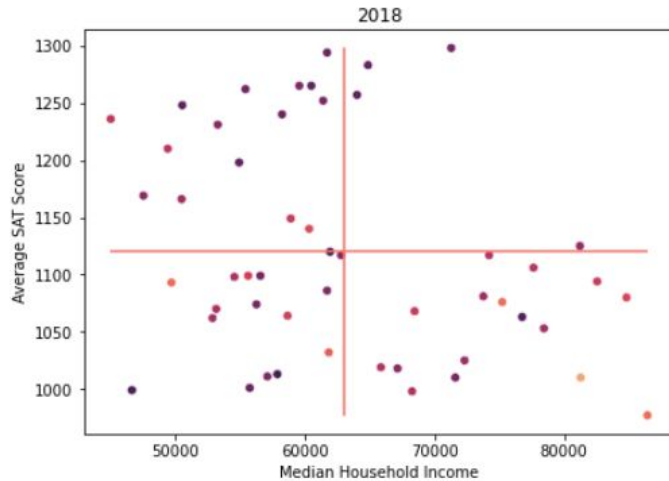


Primary Findings



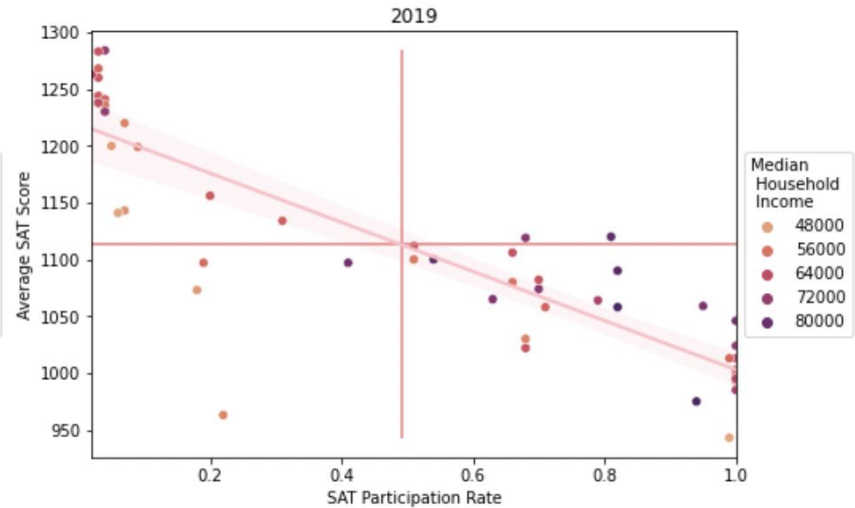
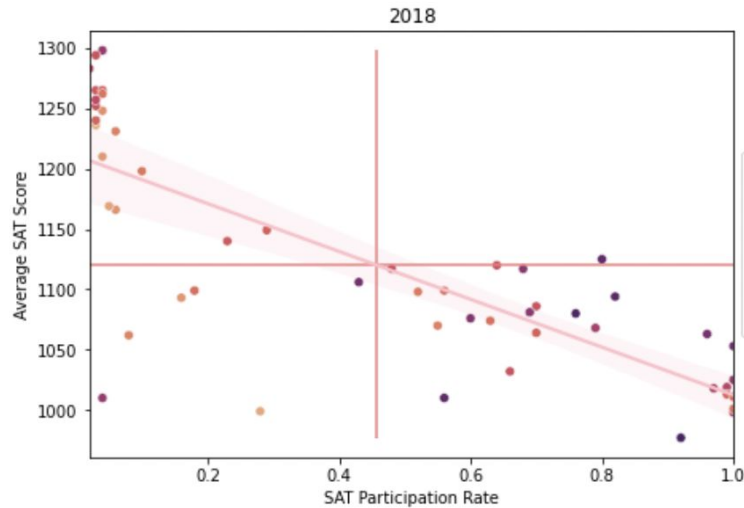
Median Income and Total SAT Score = No Correlation?

Relationship between Median Income and Total SAT Score by White Population Penetration



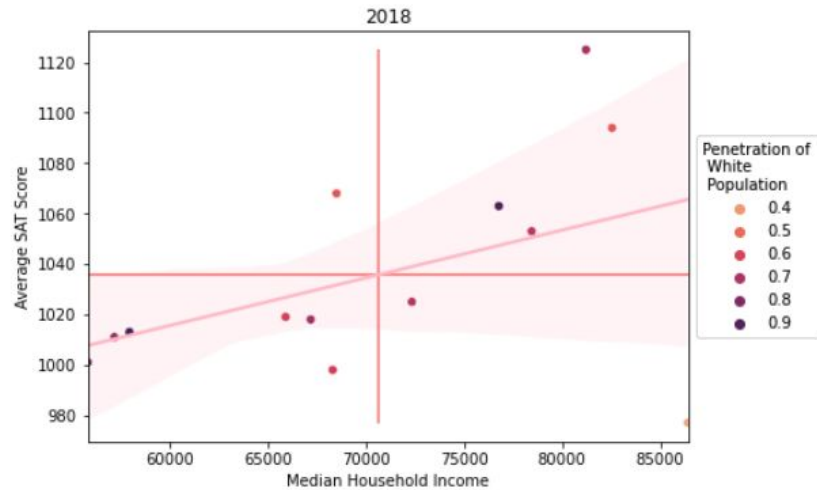
Negative Correlation between Participation and Score

Relationship between Avg SAT Score and SAT Participation by Household Median Income

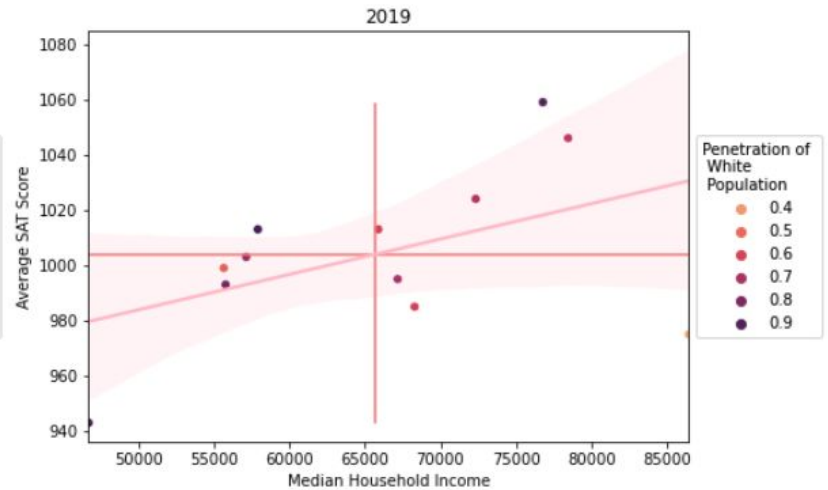


Yes, arguably there is correlation

Relationship between Median Income and Total SAT Score by White Population Penetration of States with Participation Rate above the Respective Q3s



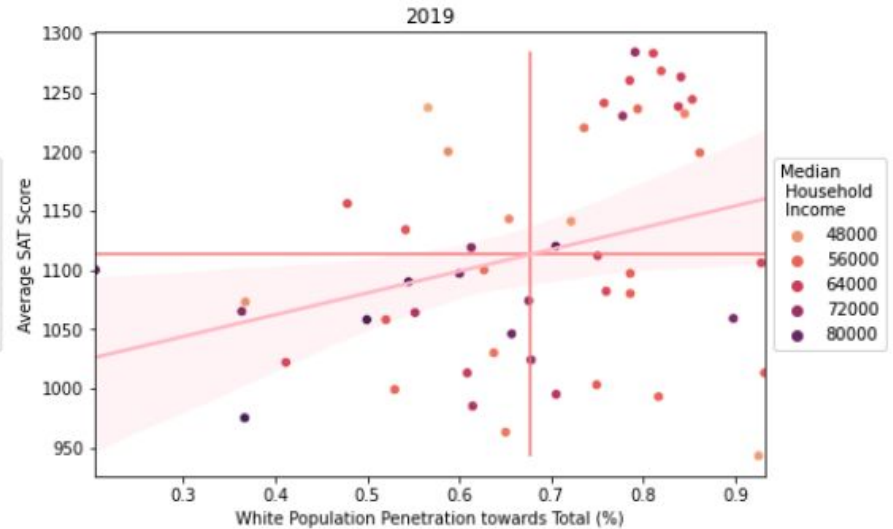
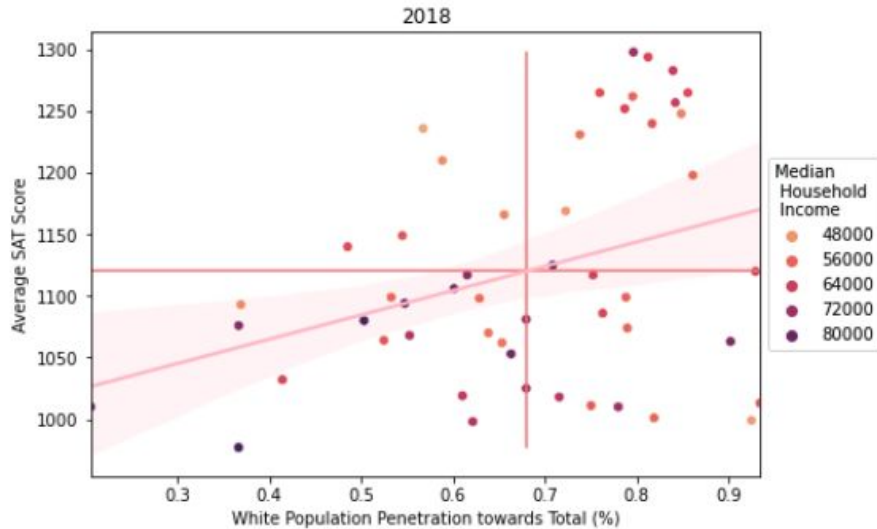
Correlation Coefficient: 45%



Correlation Coefficient: 48%

How about Ethnicity? Also, yes

Relationship between White Population Penetration and Total SAT Score by Median Household Income



Recommendation

This report suggests that there are slight positive correlations between SAT Scores and:

- (1) Household Income in states with participation rates higher than 77.5% in 2018 and 82% in 2019;
- (2) and White Population Penetration towards total Population.

This confirms the basis behind Public Counsel's lawsuit and it is recommended for X University to drop the use of SAT test scores as an admission requirement.

If the analysis were to be repeated, data points should be collected from the same population sample (instead of 3 separate contexts) so that correlation / relationship between each factor (score, household income and race) may be clearer and more precise.