



Project 1

Analysis of SAT & ACT Participation Rates

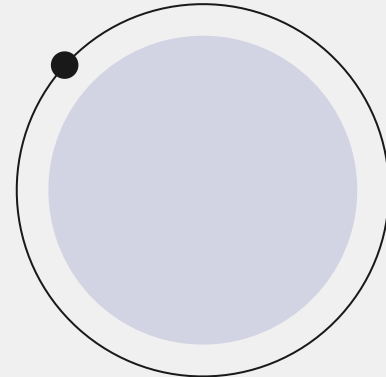
Kenneth Goh





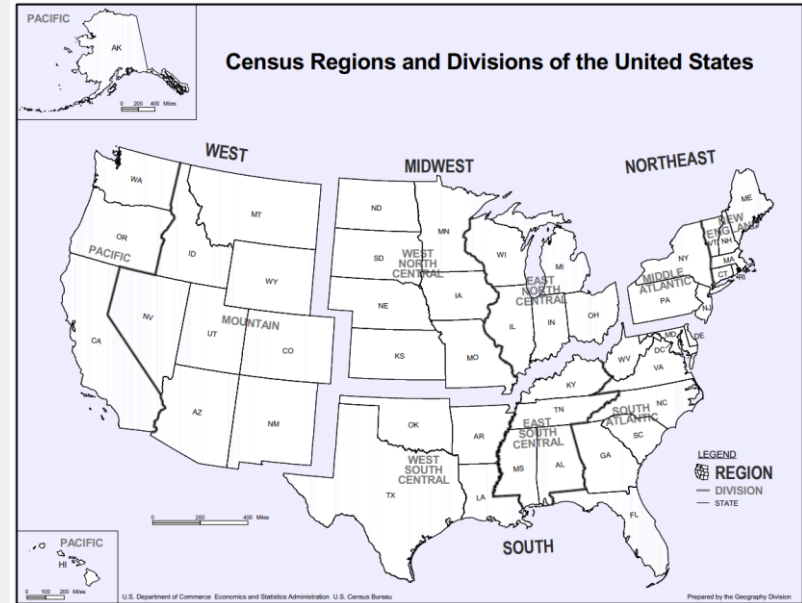
Problem Statement

The **new format for the SAT was released** in March 2016 in a bid to increase participation rate. Since then, **levels of participation in multiple states have changed** with varying legislative decisions. This project aims to **explore trends in the participation rates** of the SAT and ACT tests for the three-year period (2017-2019) and **seeks to identify regions/states that have the lowest SAT participation rates** as potential high growth areas.



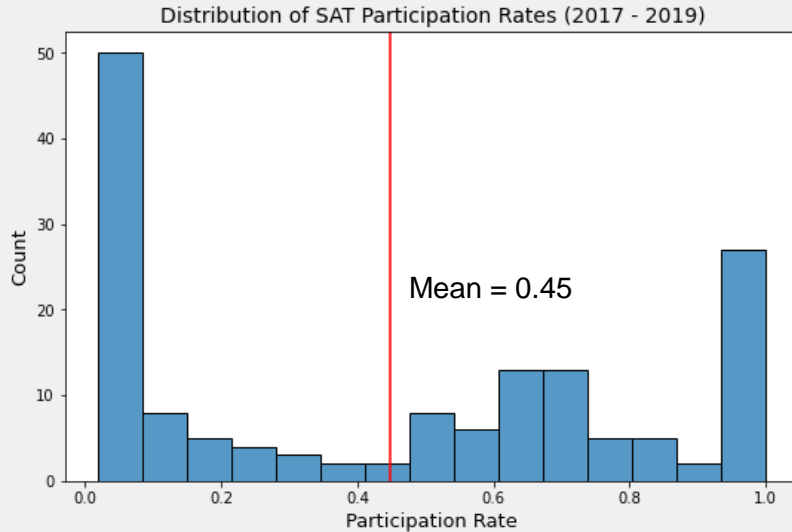
About the Dataset Used

- ACT and SAT participation data for 2017, 2018, and 2019
- Data from 51 states were included in the analysis (Virgin Islands and Puerto Rico were excluded due to missing data)
- The states were classified into 4 geographical regions (West, Midwest, Northeast, South)

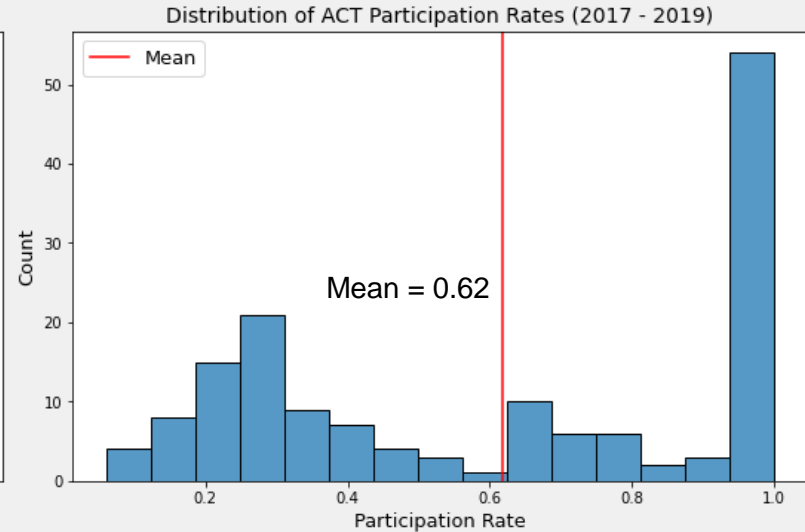


Source: [us_regdiv.pdf \(census.gov\)](https://www.census.gov/regdiv/pdf/us_regdiv.pdf)

Overall, ACT recorded higher mean participation rate (62%) than SAT (45%) over the 3-year period. SAT has high number of observations (~50) with very low participation rates (<10%)

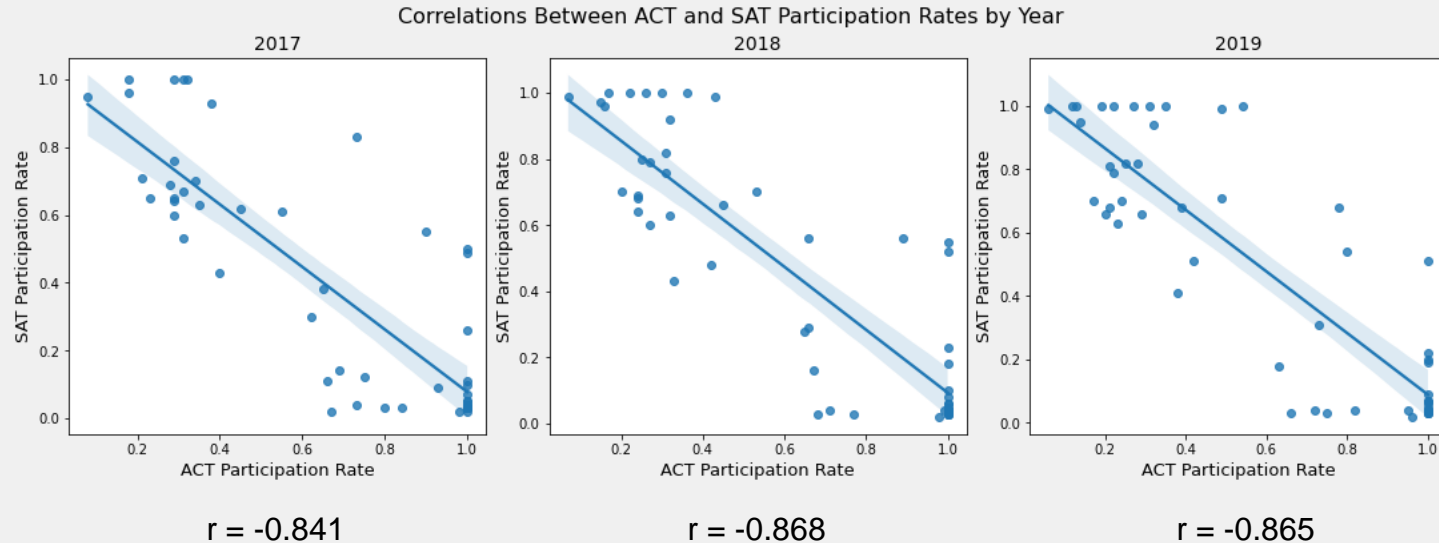


- A large number of observations (~50) recorded the lowest participation rate (<10%) and the highest participation rate (>90%) (~25 counts)



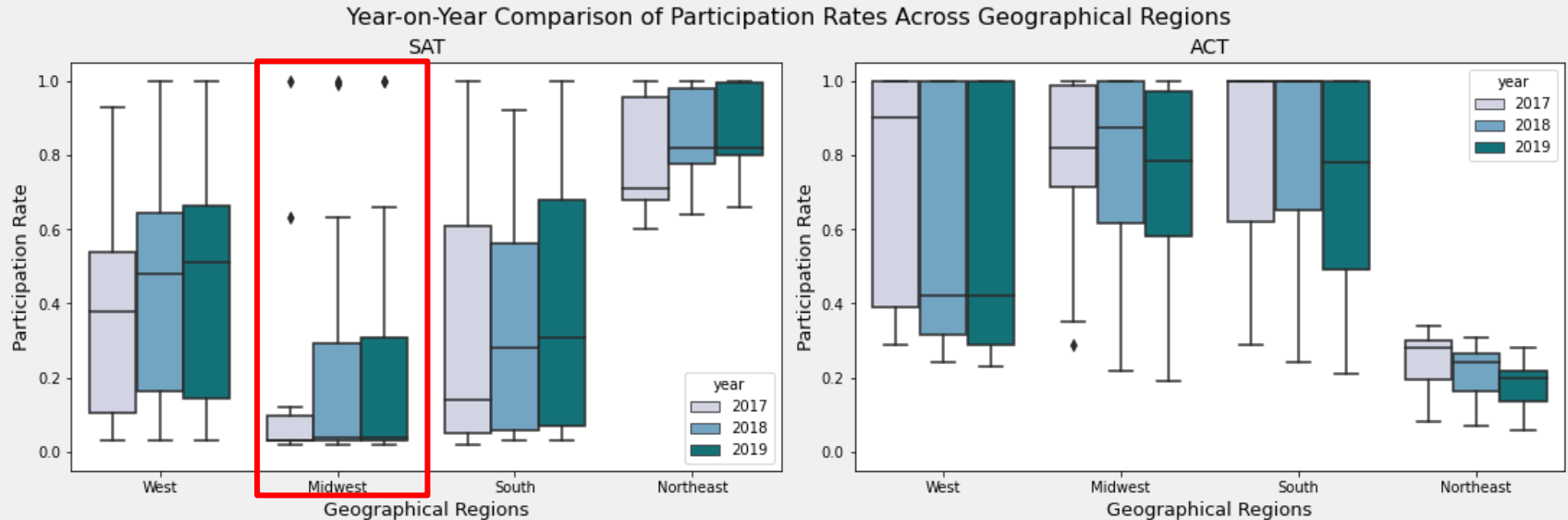
- A large number of observations (>50) recorded >90% participation rate
- In contrast, there were not many observations with very low participation rate (<10%) as compared to SAT

Strong negative correlation between ACT and SAT participation rates ($r < -0.8$)



- This corroborates with reports that students would typically take only one test – the one that meets their graduation requirements as mandated by the state, or college admission requirements.

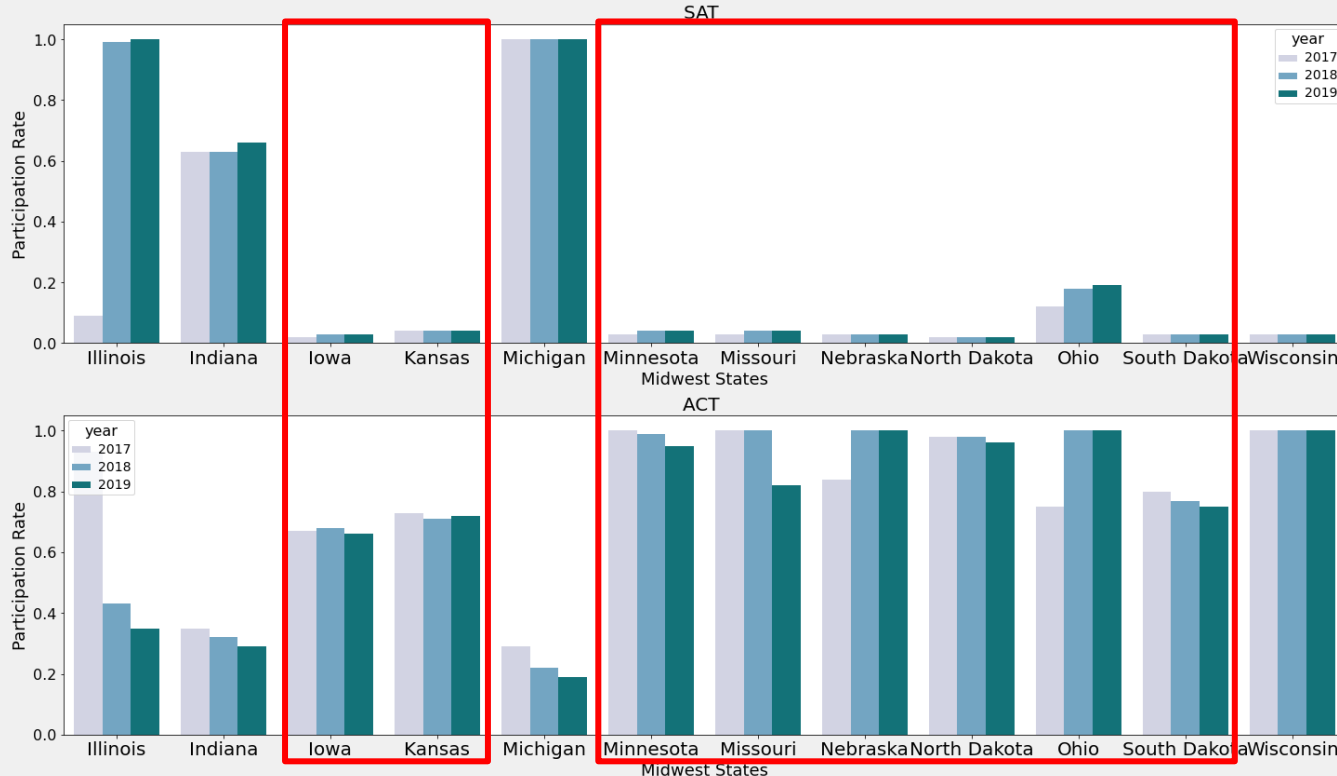
Midwest records significantly lower SAT participation rates as compared to other regions



- Midwest is identified as a suitable area to target to increase the SAT participation rate

9 out of 12 Midwest states had recorded <20% participation for SAT test. In contrast, these states had >70% participation for ACT test. There is high growth potential in this region

Year-on-Year Comparison of Participation Rates Across States in the Midwest



- SAT is mandatory for graduating students in Illinois and Michigan, hence the high participation rate (~100%); ACT is mandatory in Wisconsin
- Otherwise, students in Midwest typically take the ACT test
- With very low participating rates for SAT as a baseline, these states have very high growth potential
- Potential number of graduating students a year: **~356,000**

Source: *Knocking at the College Door* | 9th Edition | 2016 - WICHE




Recommendations

01

Collaborate with Education Boards


Promote the use of SAT as a standardised test within the states identified for graduating students through the respective Education Boards



02

Increase outreach to students


Conduct promotional talks/ roadshows to inform students of the new format and how they would benefit from it. Provide information on how it compares with the popular ACT test

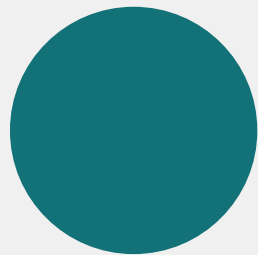


03

Free preparation resources

Extend the existing free preparation resources to paying test takers as well. If students feel well-supported with the resources, and are confident of scoring well, they would likely choose to take SAT over ACT





End

Thank You

