



Standardized Test Analysis

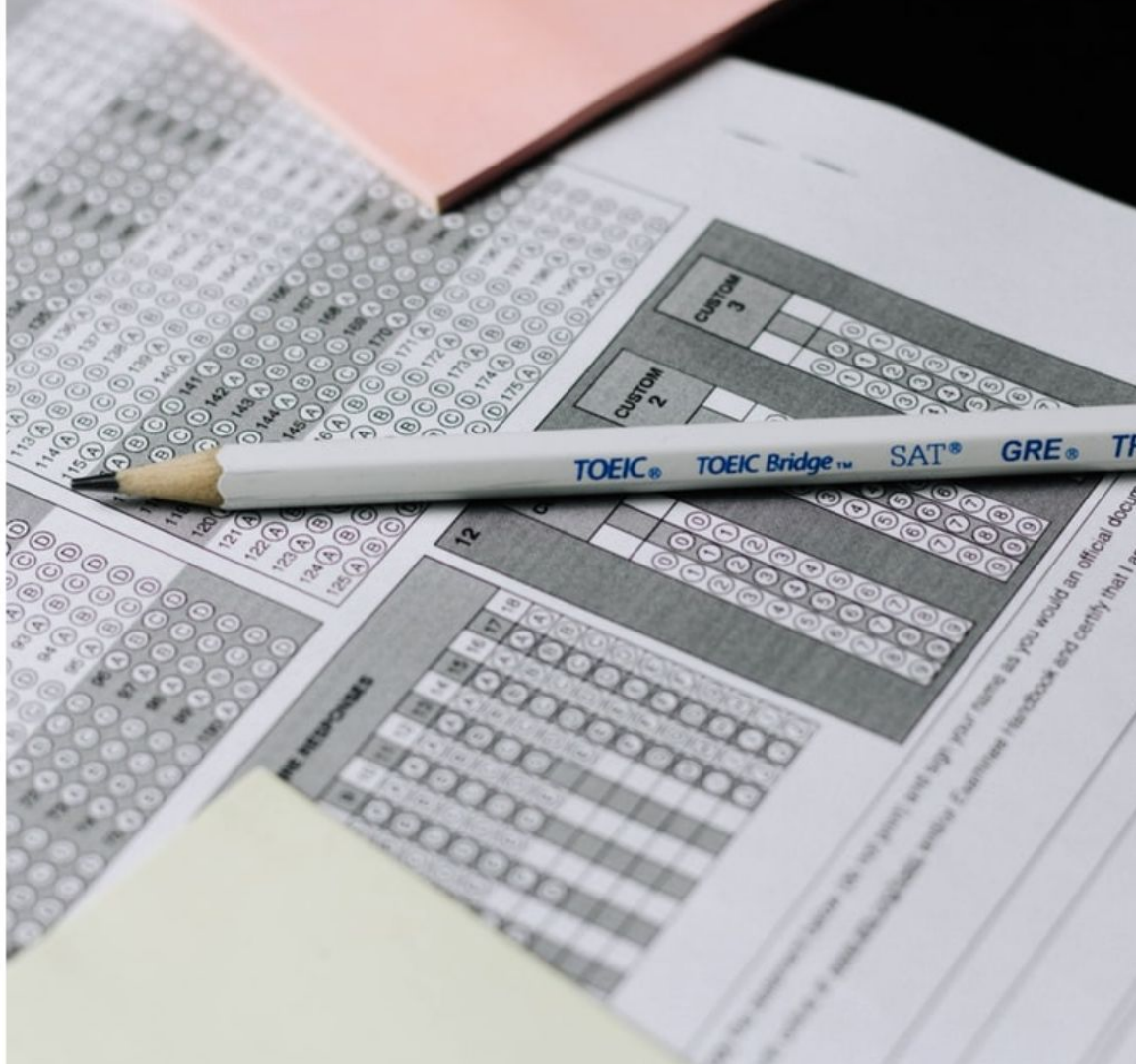
SAT & ACT

Suchanya (Mild) Trakarnsakdikul

The Data

SAT and ACT Score and
Participation Rate by State
from:

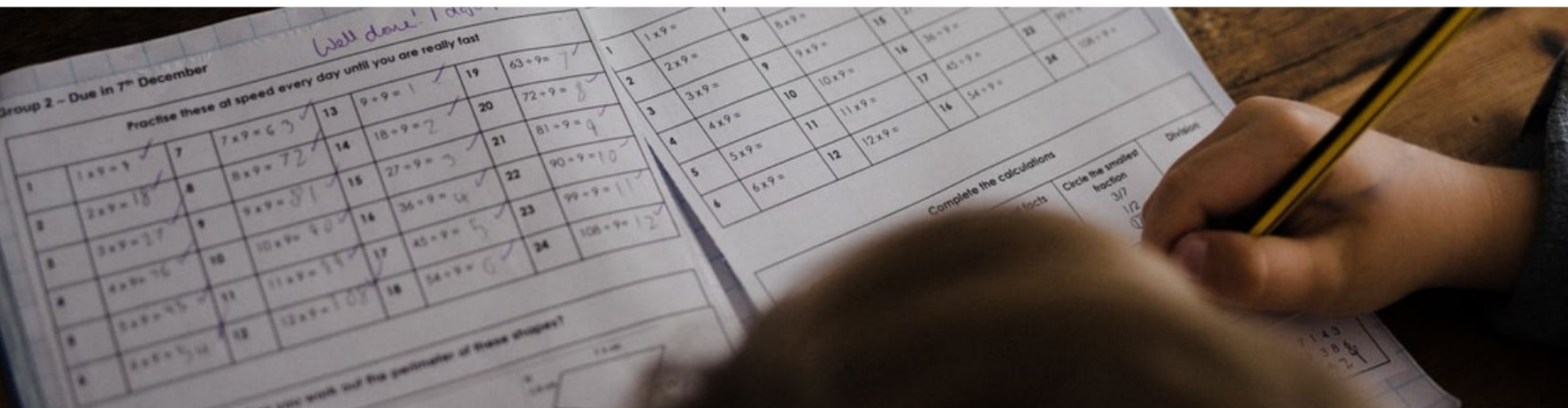
- 2017
- 2018
- 2019



The Question

How do the participation rates and scores vary from SAT and ACT?

I want to uncover the underlying patterns, to be able to suggest appropriate solutions for the different states, allowing them to improve their score and their respective preferred test participation rates.



It's all about your preferences

SAT

154 Q's / 3hours

- 3 Sections: Reading, English, Math
- Score: 400-1600
- Cost: 52USD
- Seven times per year: March, May, June, August, October, November, December

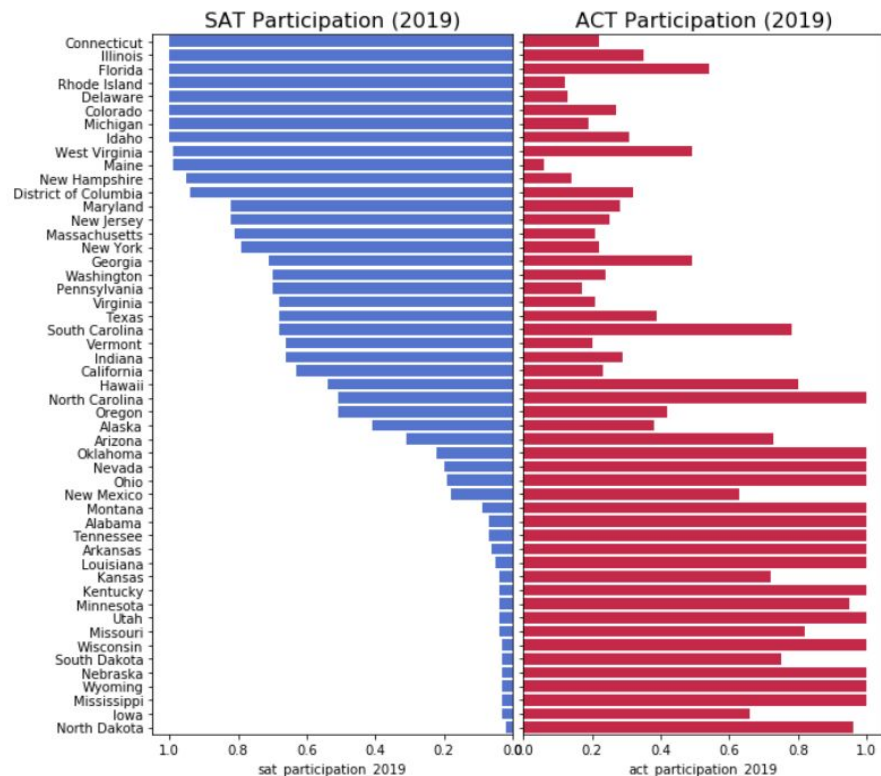
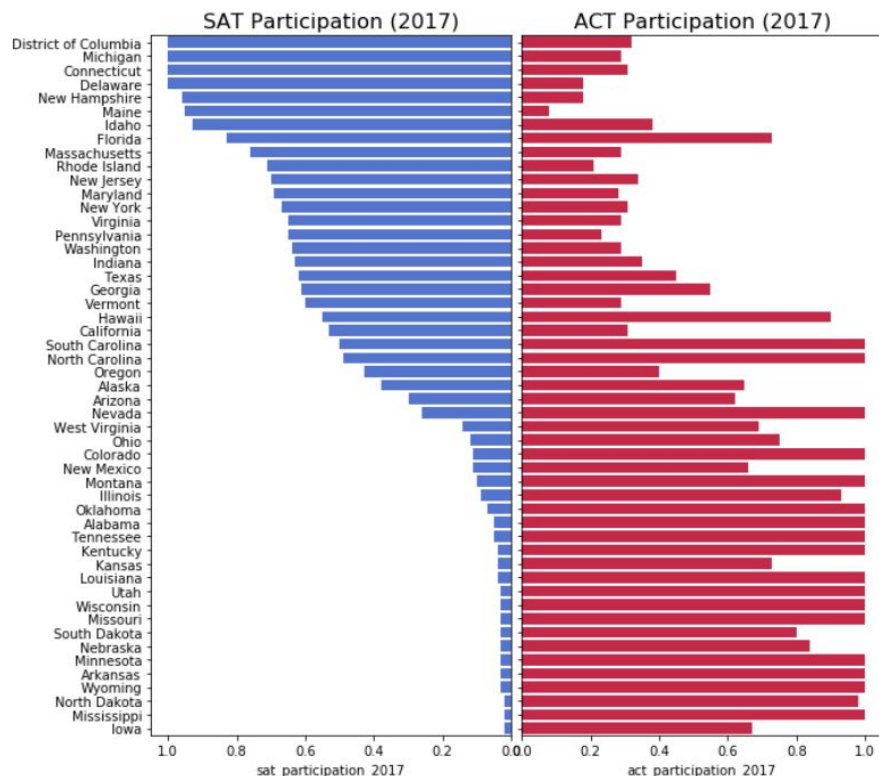
vs.

ACT

215 Q's / 2hours 55mins

- 4 Sections: Reading, English, Math, Science
- Score: 1-36
- Cost: 55USD
- Seven times per year: February, April, June, July, September, October, December

Where are the students?



Region



28 states had more than 50% Participation Rate in the 2019 SAT where 32% were northeastern states

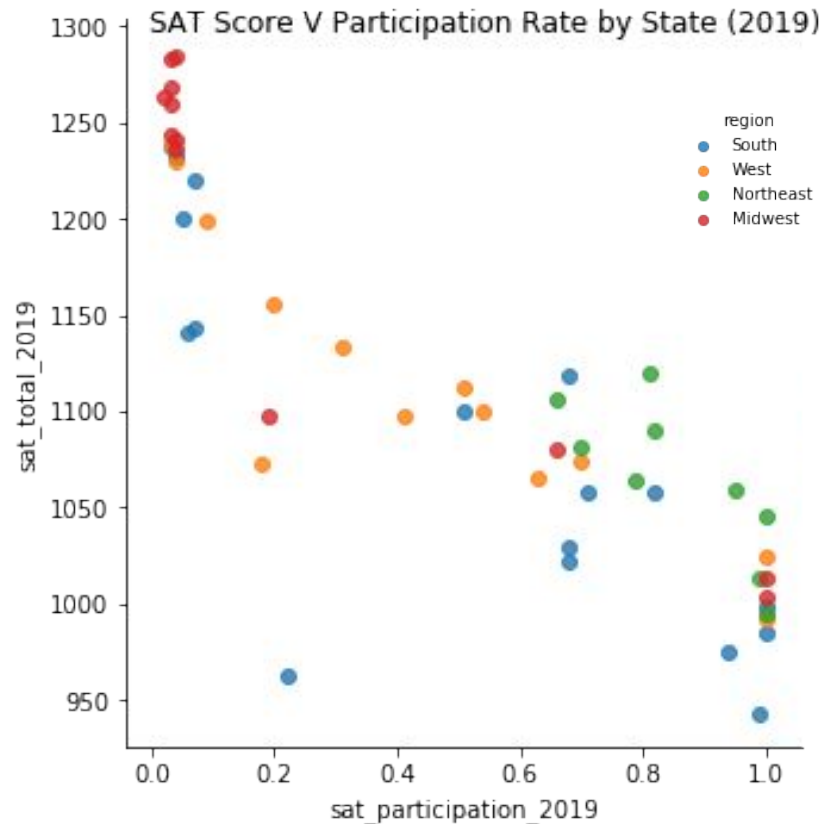


26 states had more than 50% Participation Rate in the 2019 ACT where 35% were midwestern states

Mandatory SAT

Some states are contracted with College Board to provide SAT to some or all high school juniors for free.

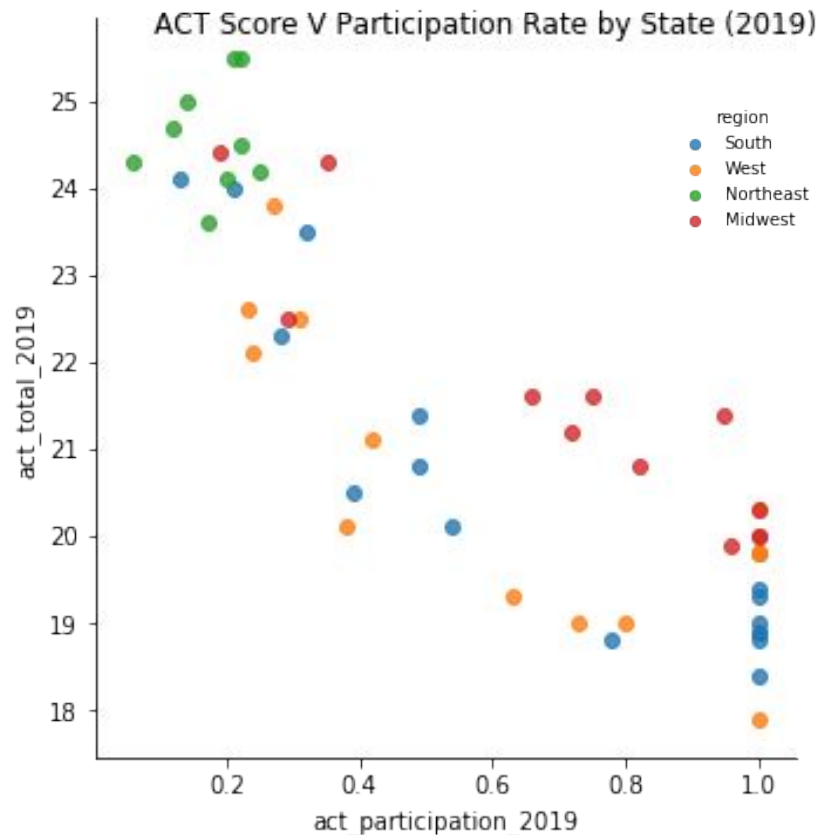
South	West	NorthEast
<ul style="list-style-type: none">• Tennessee• Delaware• Oklahoma• West Virginia• South Carolina• District of Columbia	<ul style="list-style-type: none">• Idaho• Colorado <p>MidWest</p> <ul style="list-style-type: none">• Ohio• Illinois• Michigan	<ul style="list-style-type: none">• Maine• Connecticut• Rhode Island• New Hampshire



Mandatory ACT

Some states are contracted with ACT Inc. to provide free ACT testing to some or all high school juniors.

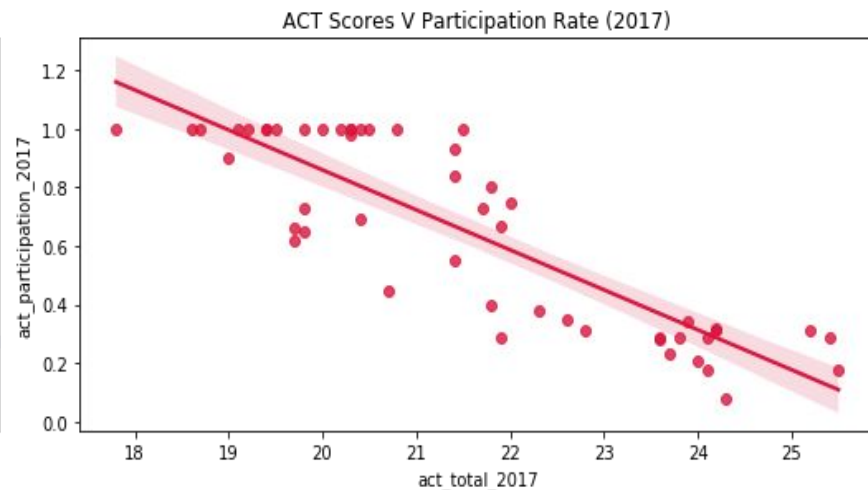
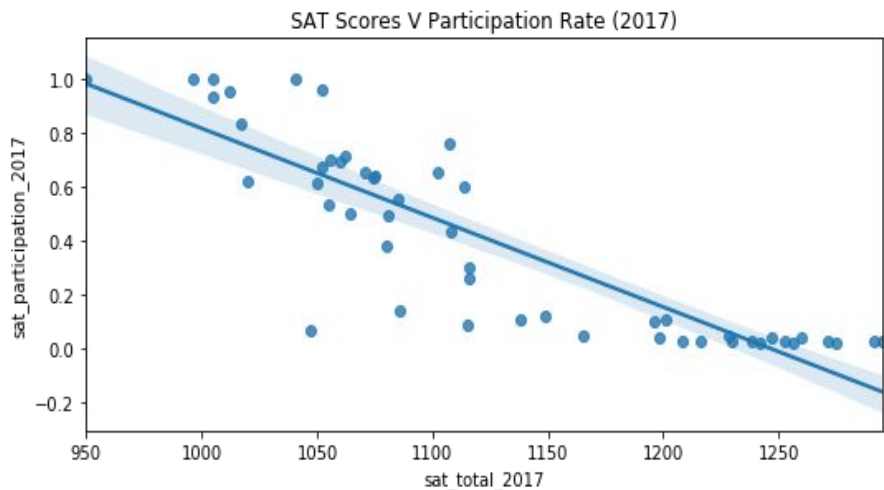
South	West	MidWest
<ul style="list-style-type: none">AlabamaKentuckyMississippiNorth CarolinaSouth CarolinaTennessee	<ul style="list-style-type: none">HawaiiIdahoMontanaNevadaUtahWyoming	<ul style="list-style-type: none">NebraskaOhioWisconsinWyoming



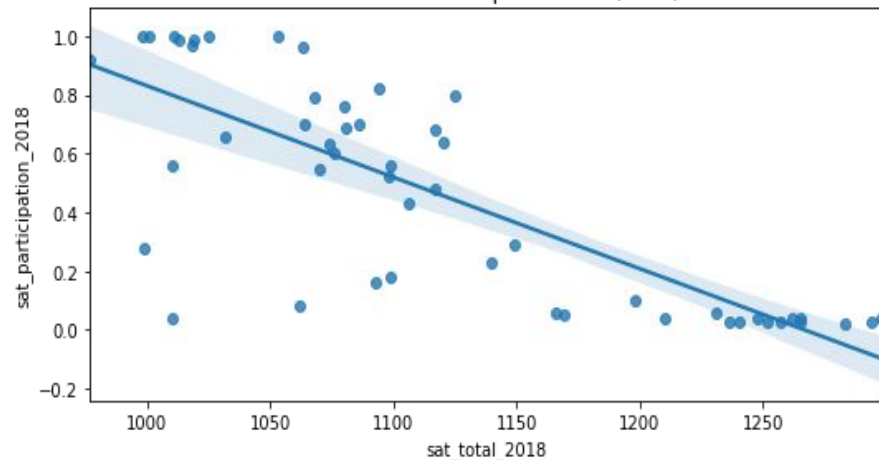
2017 – 2019 Total Score and Participation Rate Trend

There is a negative correlation between participation rate and total score for both tests.

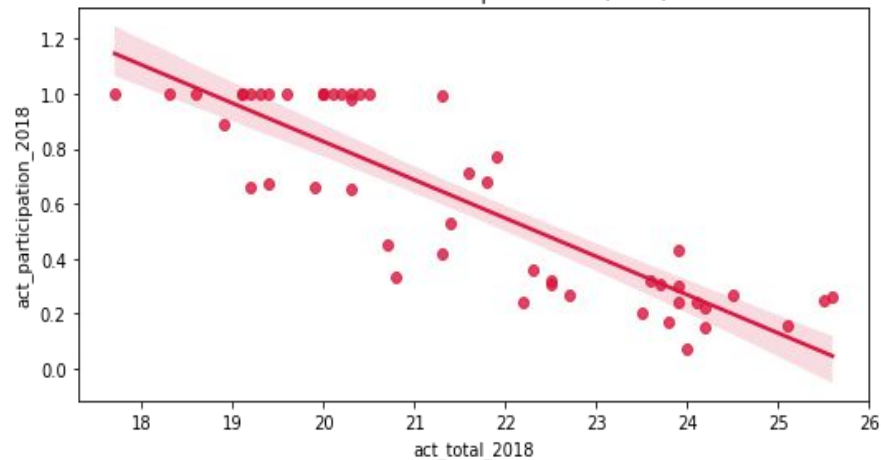
This could be because in states where either test is mandatory the students do not have a choice whether or not to take it. This means that they are less likely to put an effort or study thus lowering the average score in high participation state.



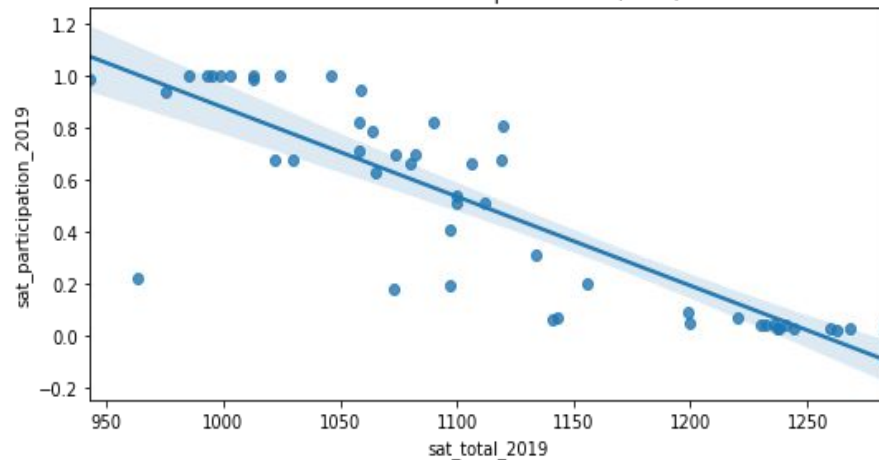
SAT Scores V Participation Rate (2018)



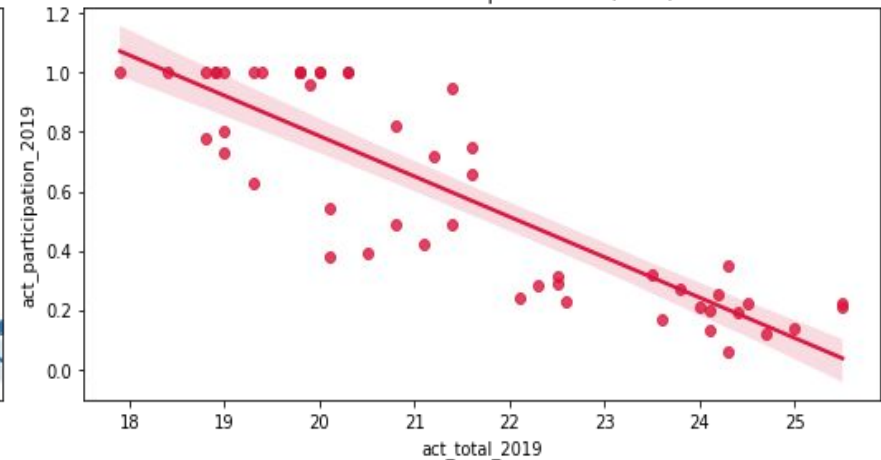
ACT Scores V Participation Rate (2018)



SAT Scores V Participation Rate (2019)



ACT Scores V Participation Rate (2019)

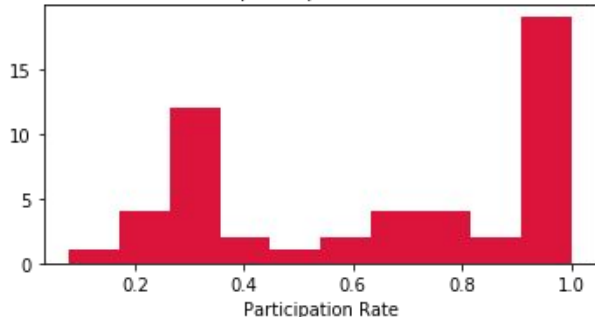


2017 – 2019 Total Score and Participation Rate Distribution

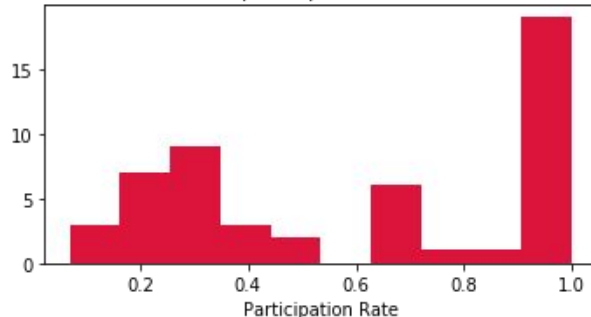
The participation rate either skewed left or right and no in-between suggesting that different stats only emphasized one test over the other and we don't usually see a 50% participation rate from both tests.

Overall, the trend and distribution of the participation and total score remains the same over the three years

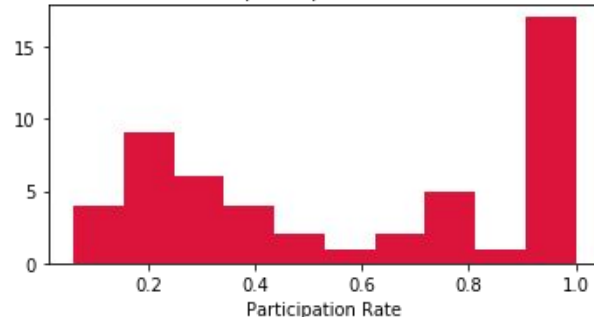
ACT participation (2017)



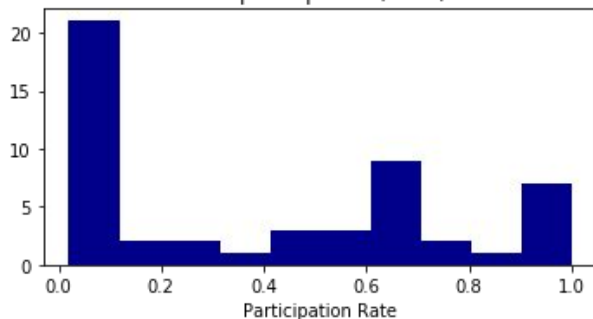
ACT participation (2018)



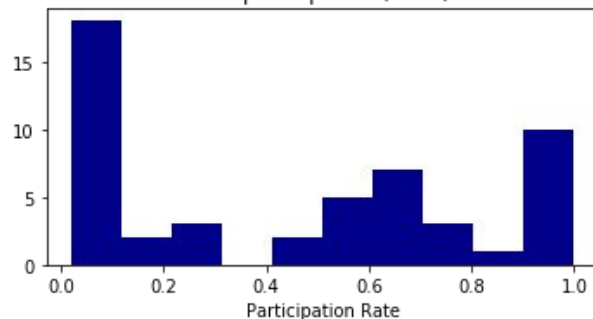
ACT participation (2019)



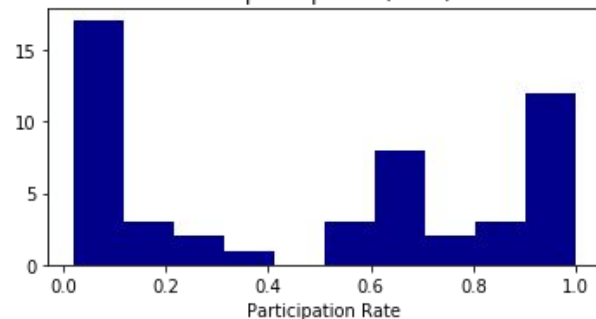
SAT participation (2017)



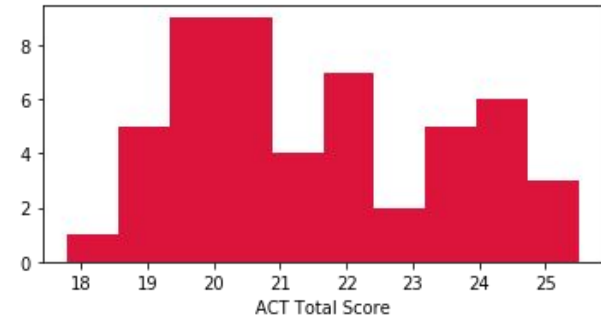
SAT participation (2018)



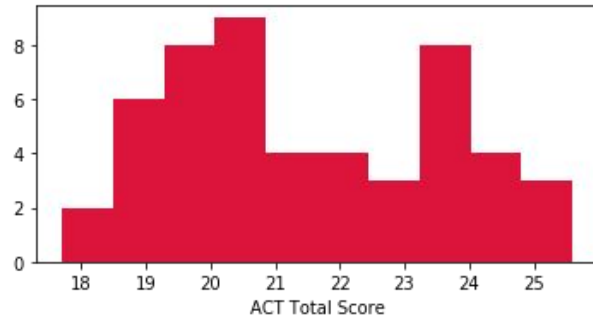
SAT participation (2019)



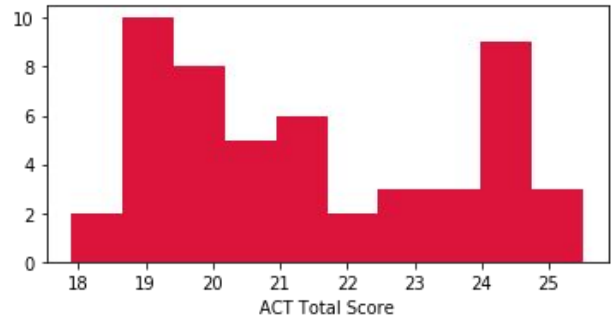
ACT 2017 Total



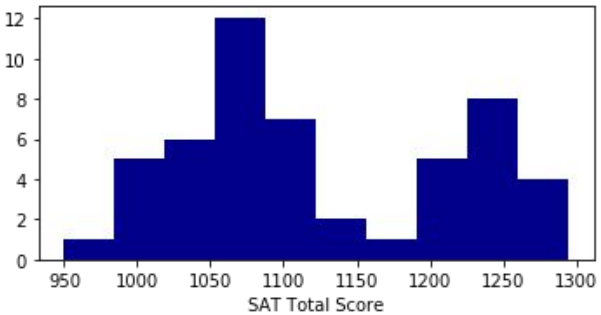
ACT 2018 Total



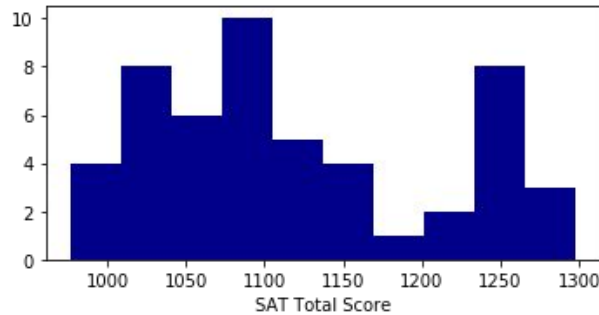
ACT 2019 Total



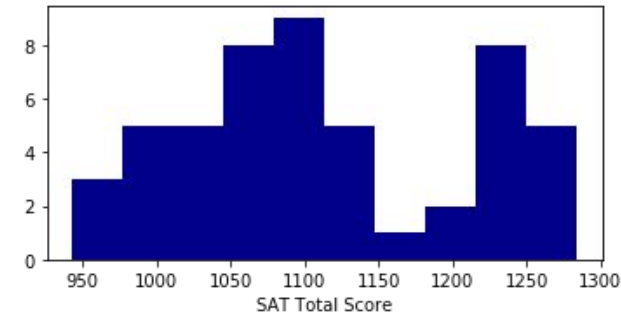
SAT 2017 Total



SAT 2018 Total



SAT 2019 Total



Insights



States Distributions

A high participation rate in one test results in a low participation rate for the other test.



The Correlation

There is a distinct negative correlation between total test score and participation rate in all the years explored.



The Underlying Trends

Over the three years, the trends and distribution remain similar for SAT and ACT's participation rates, scores and region spread.

State Specific Recommendation

- SAT is the most popular in Northeastern states
- ACT is the most popular in Midwestern states
- Both tests have more than 50% participation rate in the Southern states



Mandatory Testing

Contact government officials in the states where there is no mandatory SAT or ACT testing and partner with them to offer standardized testing.



Population Density

Target states like California with high population density and no mandatory testing first, as this will allow for a higher success rate of growing the participation rate.

Participation Rate Specific Recommendation



Competitive Pricing

Currently, both the SAT and ACT are priced similarly, to differentiate themselves they can offer a much lower price or other benefits to taking their test like free score reports for college applications.



Provide More Resources

Testing resources are hard to find or expensive in non-mandatory testing states. Being able to provide free resources or testing practice would give the testing agency an advantage over the other option.

Additional Information



District or County Information

We can use the information to explore the distribution or trends in different districts to identified other area to target



Other State Related Statistics

Through using data like age, socioeconomic factors like income or highschool attended we can identify different student segmentations and their score or participation distributions



Thank You

Any Questions?

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Sources

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