

# DSI Project 1

How College Board can improve SAT Participation Rates

Presented by Yong Fah Aik

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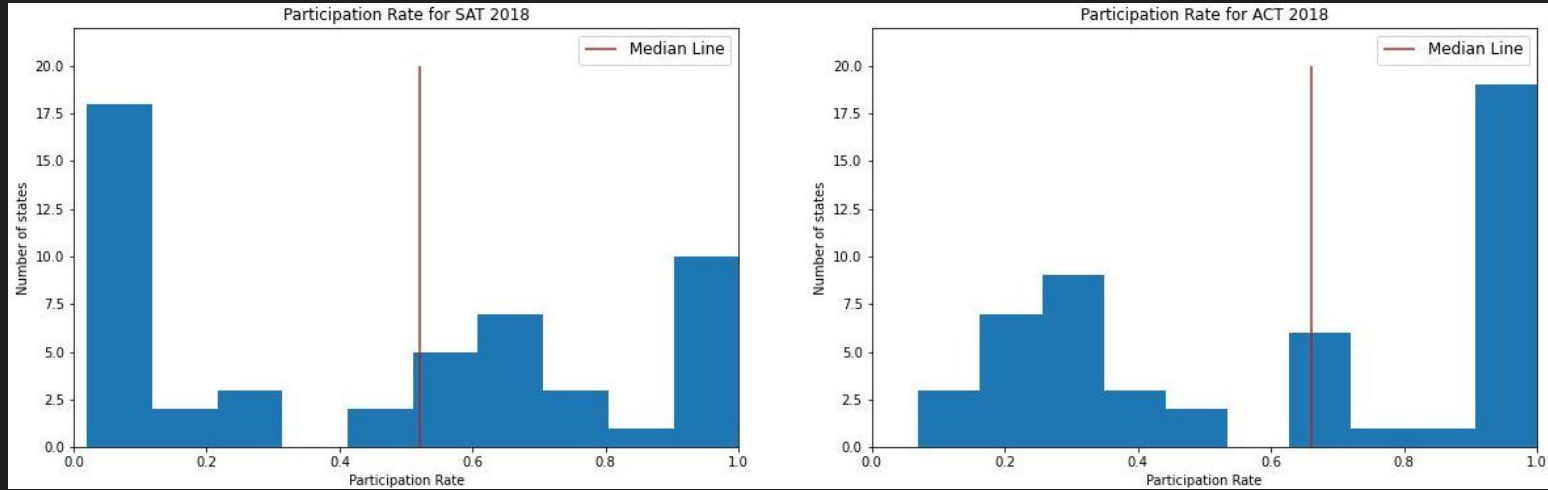
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# Problem Statement

This project is tasked with the following:

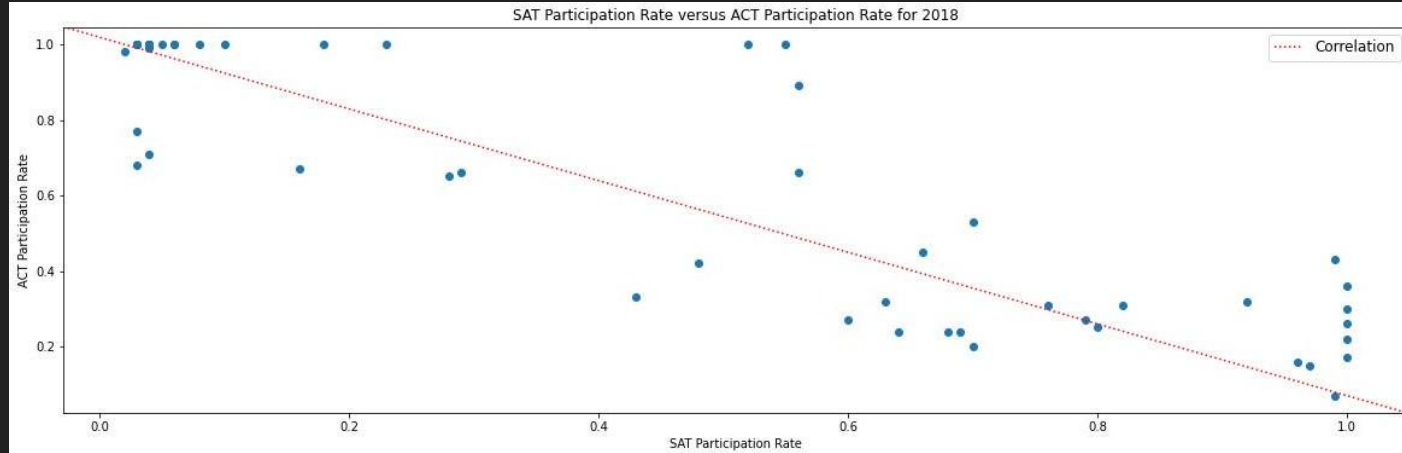
- The exploration of the trends in SAT and ACT participation rates for the years 2017 to 2019
- The identification of any trends that will help in the recommendations to the College Board on how to **improve the participation rates** in states with low or decreasing SAT participation rates.

# Exploratory Data Analysis (EDA)



Taking a look at the *Participation Rates* for 2018, we can see the two graphs are roughly mirrored. This suggests the idea that most students would be likely to take either one of the test and as such, we need to address the relationship between the two.

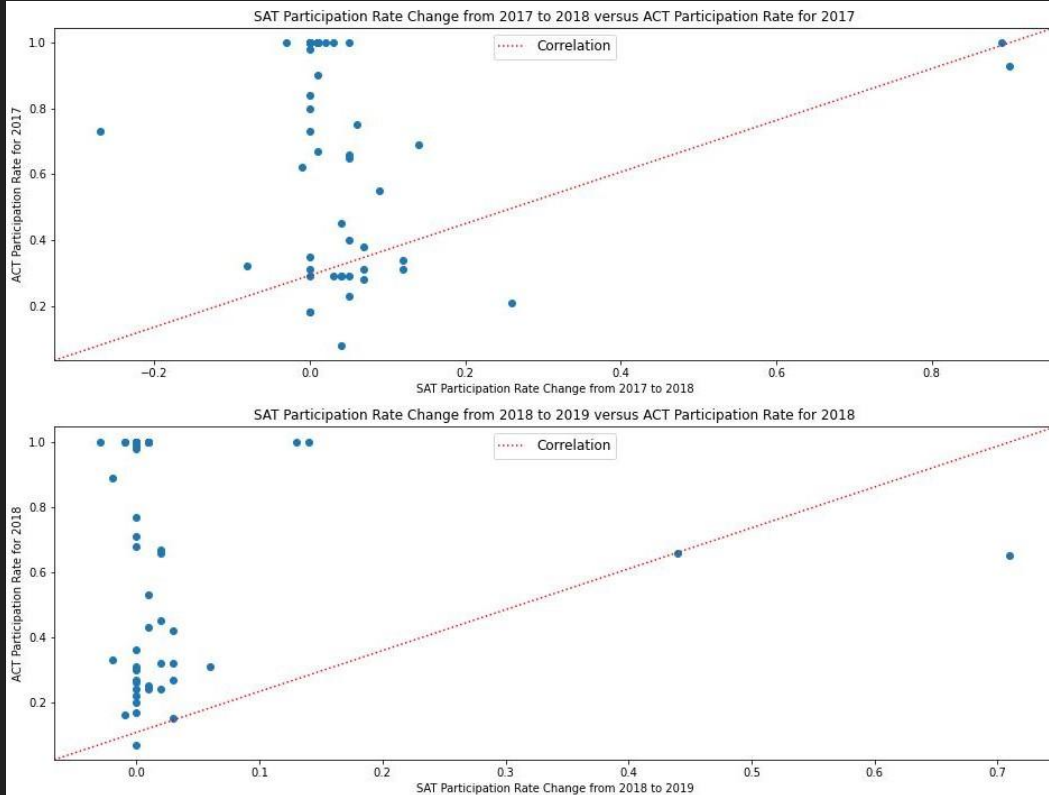
# Exploratory Data Analysis (EDA)



The above graphs show the inverse correlation between the *SAT Participation Rate* and the *ACT Participation Rate* for the year 2018.

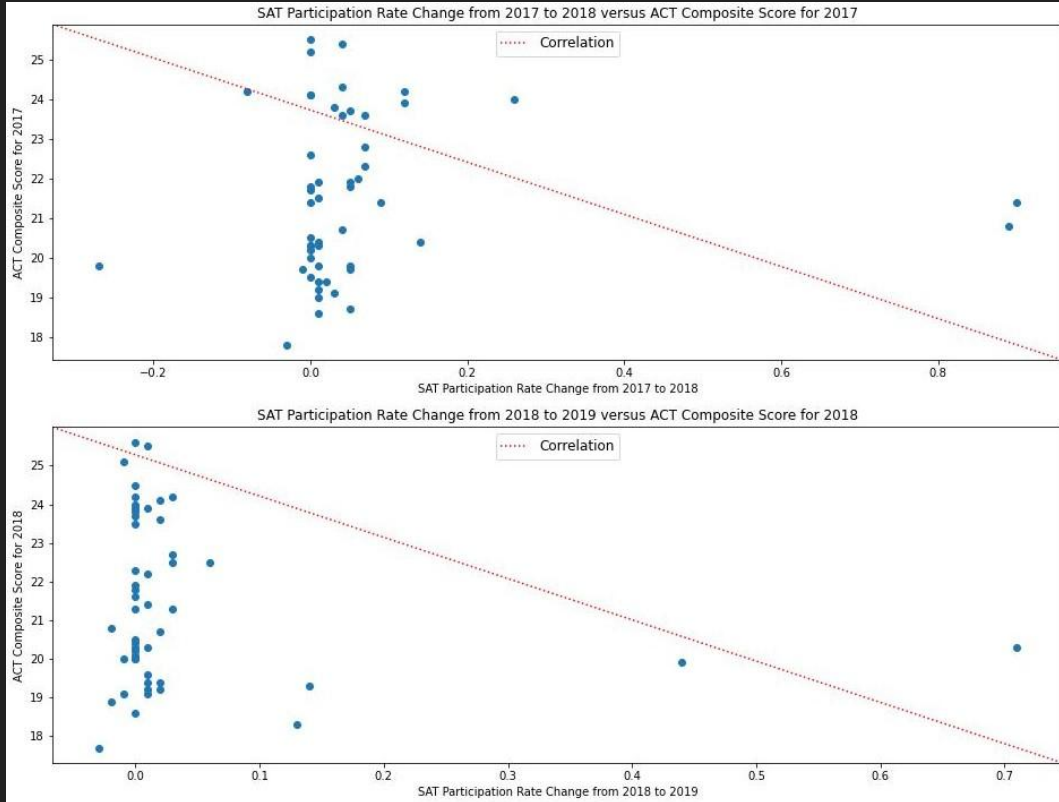
**Key Finding:** This suggests that a state with a low SAT Participation Rate will be likely to have a high ACT Participation Rate.

# Key Findings



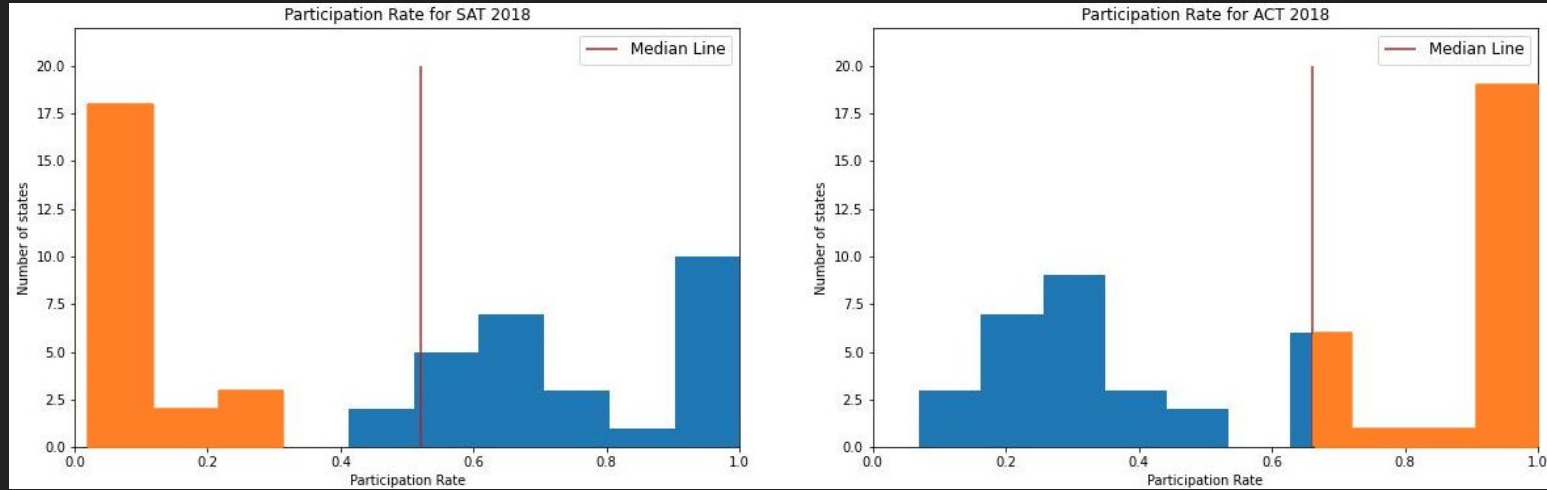
No obvious correlation between the *ACT Participation Rate* of a year impacting the **Change in Participation Rates** of that year and the next, despite the speculated positive correlation shown by the red dotted line.

# Key Findings



No obvious correlation between the *ACT Composite Score* of a year impacting the **Change in Participation Rates** of that year and the next, despite the speculated negative correlation shown by the red dotted line.

# Target states for improvements



Taking into account our findings from before, we are unable to identify trends in decreasing participation rates. As such, we have to identify states with low participation rates instead. However, states with low SAT participation rates tend to be states with high ACT participation rates, and we found that states with near 100% ACT participation rates make it compulsory to take ACT.



# Target states for improvements

As such, we have to choose states with low SAT participation rates and not very high ACT participation rates.

Our targeted states for aid would be as follows:

- Iowa (2-3% SAT, 66-68% ACT in the years 2017-2019)
- Kansas (4% SAT, 71-73% ACT in the years 2017-2019)
- New Mexico (11-18% SAT, 63-67% ACT in the years 2017-2019)

# Recommendations

By taking a look at the states with the drastic increases in SAT Participation Rates and determining the reasons for these successes, our recommendations will be as follows:

1. Working with the states to make SAT the compulsory test to take
2. Working with the schools in the states in order to make SAT the more accessible test compared to ACT
3. Covering all or part of the costs for taking the SAT test