

Project 1: SAT & ACT Analysis

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SAT & ACT Testing: Defining the Problem

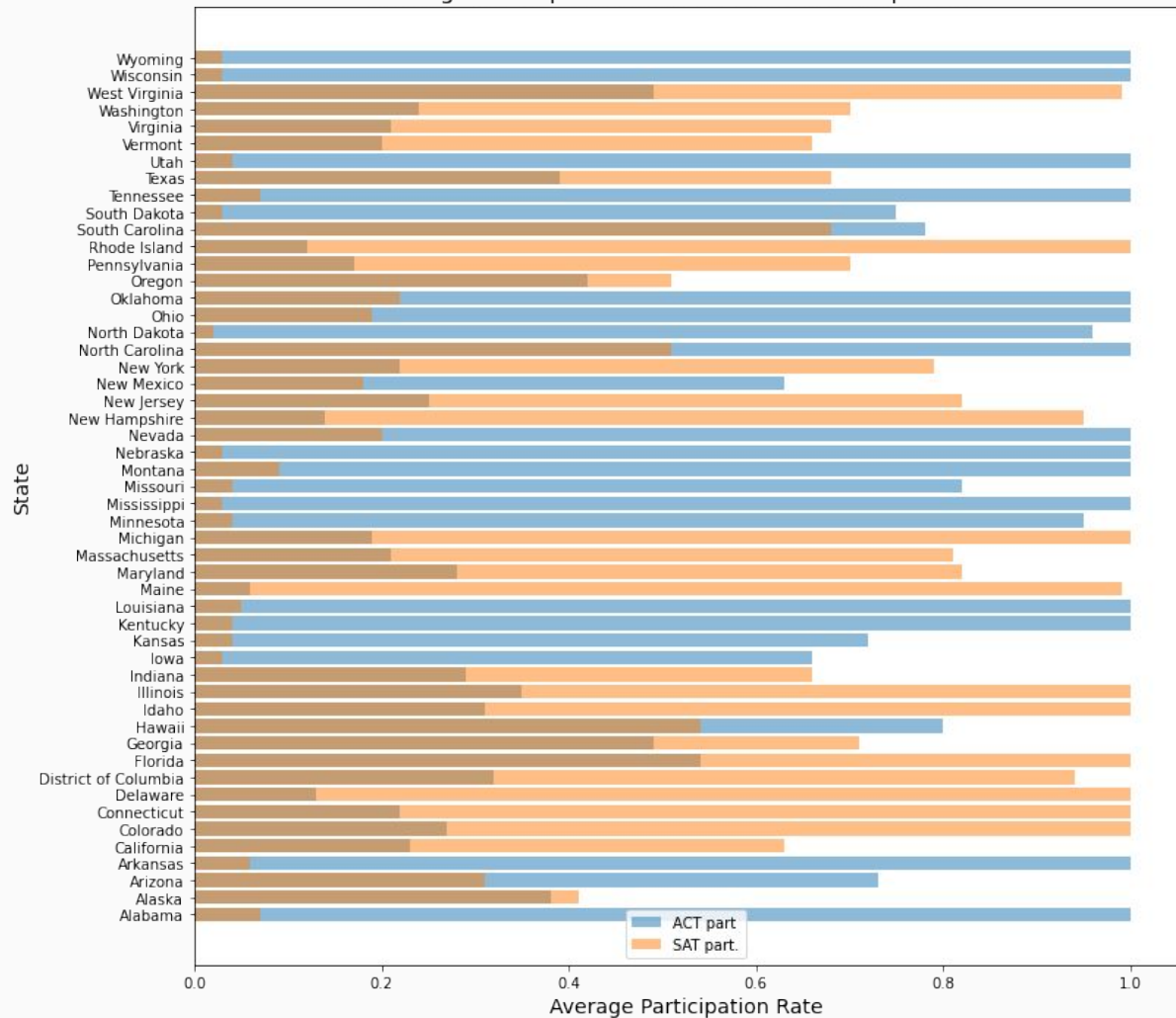
What is the problem?

How can we increase SAT or ACT participation in specific U.S. states with low participation rates?

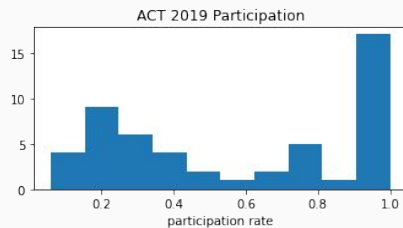
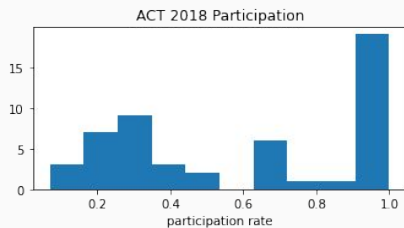
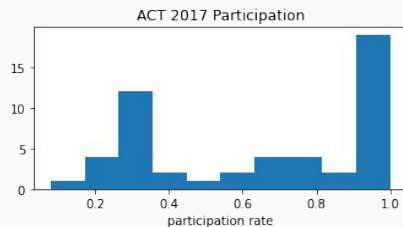
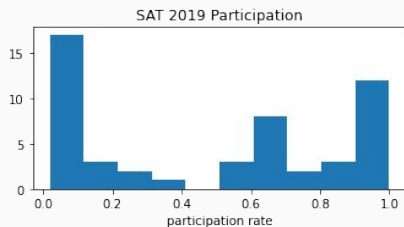
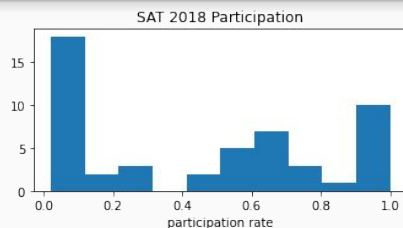
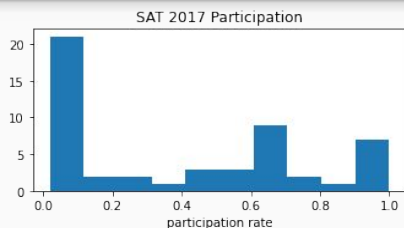
How are we going to try to solve it?

Through utilization of the ACT & SAT 2017-2019 Dataset, we can analyze this data to find correlations and trends that can help improve participation rates.

Average Participation Rate for ACT and SAT per State

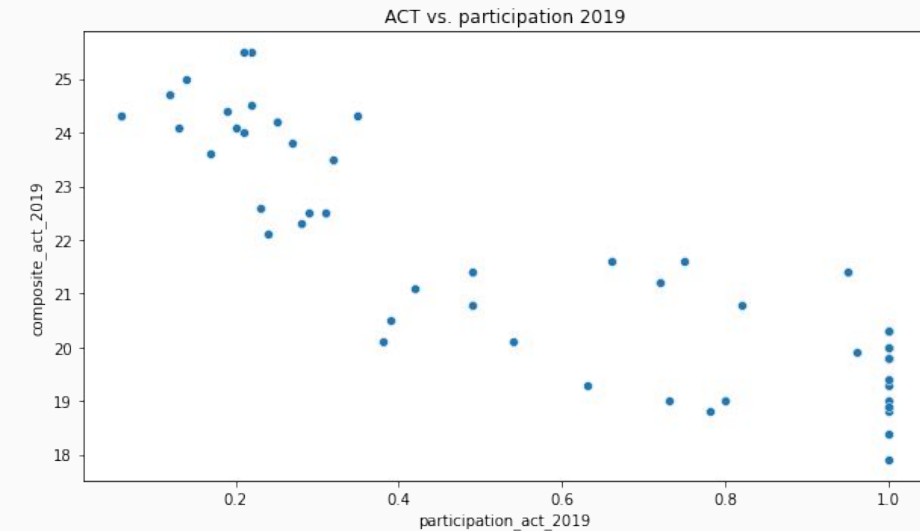
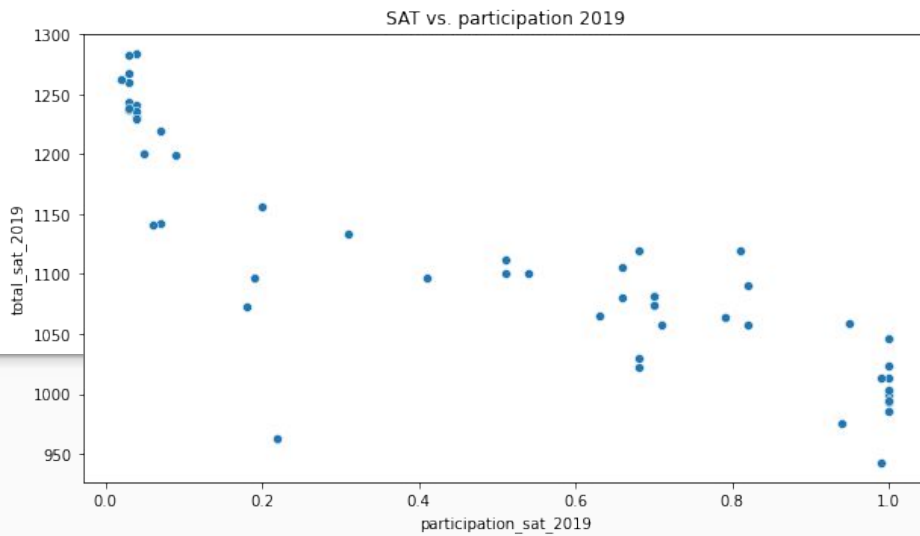


Observations



- ❑ SAT has a greater amount of states with very low avg. participation rates, and ACT has a greater amount of states with very high avg. participation rates.
- ❑ Participation rates are heavily concentrated. Usually around >90% for one test, and <10% for the other.
- ❑ 18 States require the ACT, 11 States require the SAT, 3 require either ACT or SAT. This policy heavily impacts participation rates.
- ❑ No State requires both tests.

Participation versus Scores

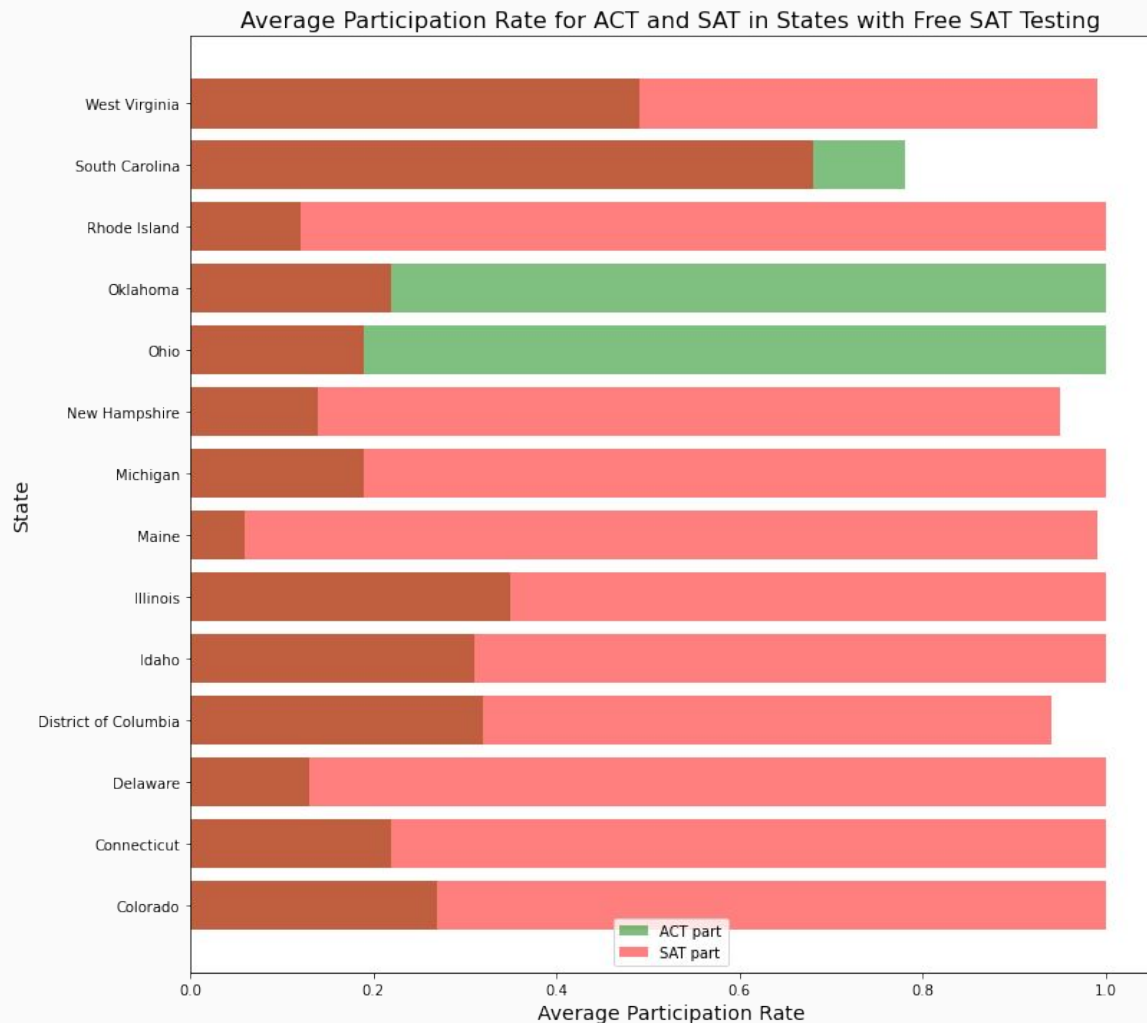


The Impact of Free Testing

States that have free testing show much higher SAT rates, with none below 20%. Interestingly, ACT testing has never been below 0.5% for any state in the dataset, even if it is not free. However, SAT has gone as low as 0.2%. This tells us (along with other metrics) that the ACT seems to be a higher-quality test.

Source:

<https://blog.prepscholar.com/which-states-require-the-sat>



Case Study: Colorado

Colorado went from an extremely low 0.11 in SAT participation rate in 2017, before skyrocketing to 1.0 participation rate in 2018. Inversely, ACT rates dropped from 1.0 to 0.3 within one year.

Reason for this:

Mandatory Testing: Colorado passed a new law in 2017 that switched from mandatory ACT to mandatory SAT testing.

Cost Increased: ACT testing was no longer free.

School System: It no longer was under the direct responsibility of the educational system to prepare students for the ACT. All training switched to SAT, which does not include Science.

SAT		ACT	
Year	Participation Score	Year	Participation Score
2017	11%	2017	100%
2018	100%	2018	30%
2019	100%	2019	27%

Recommendations

- ❑ Make ACT testing free state-wide.
- ❑ Educational training should be more generalized, including topics such as science.
- ❑ Encourage students to take both tests. (Do not make both mandatory).
- ❑ Work with teachers and school systems to modernize and streamline training process and efficiency.
- ❑ Increase specificity and scale of data collection. Examples include: SAT Math(without calculator), Income, Universities applied to.