

Why California Should Invest in ACT Over SAT

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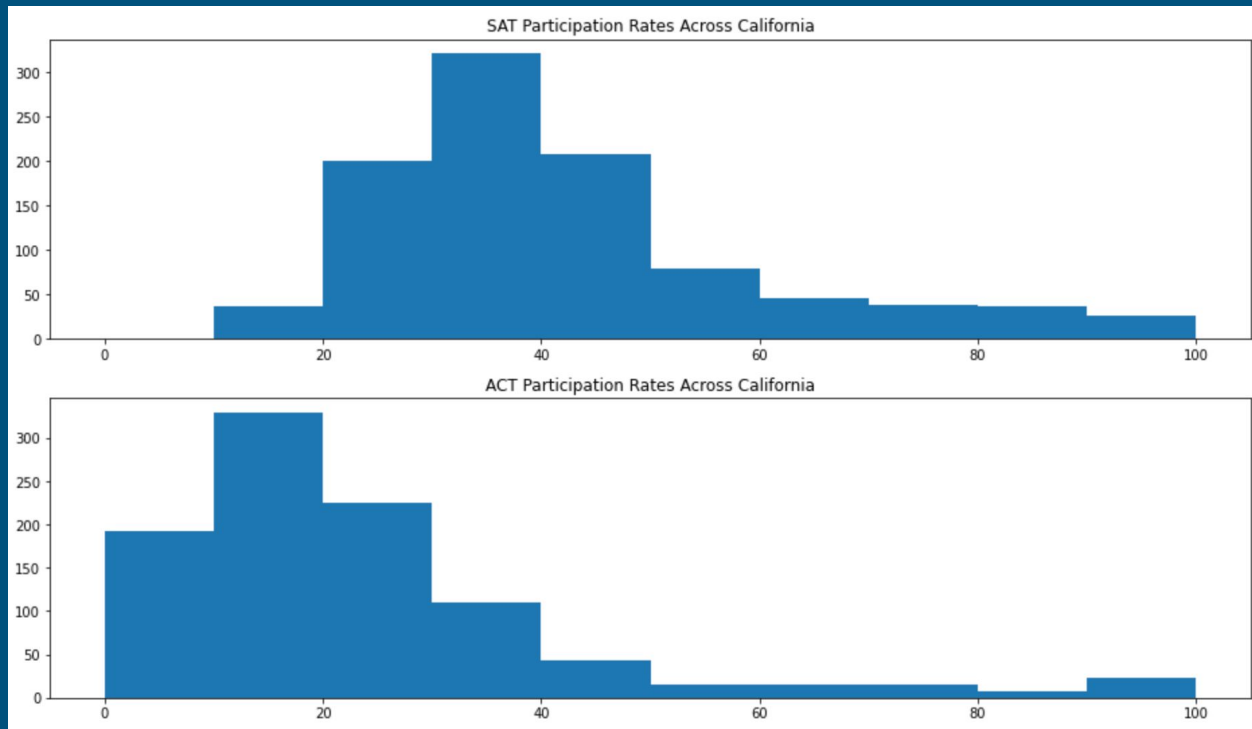
The Issue at Hand

- High schools in California allot considerable resources to improve the standardized test scores of their students (source), since those scores play a significant role in college admission and curriculum development (source).
- This project analyzes SAT and ACT data from schools across California to recommend whether the state should invest more funding on SAT or ACT programs.



CA's SAT vs ACT Participation in 2018-19

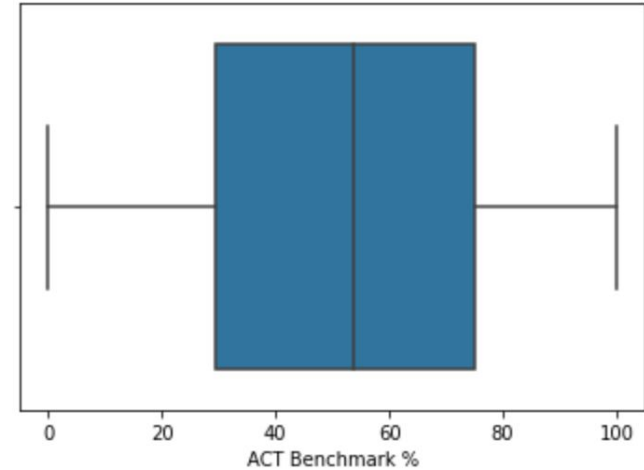
- ACT Participation Rate frequency skews to the left of SAT Participation Rate frequency
- These histograms indicate CA schools enroll larger proportions of senior students in SAT than in ACT.



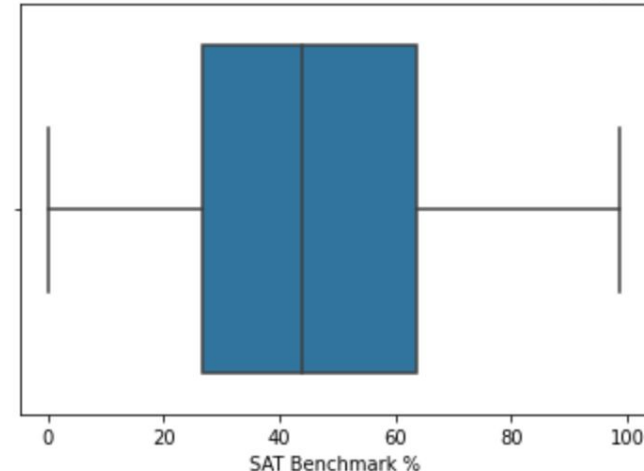
Summary Statistics for Benchmark Achievement Rates

- The Q1, median, Q3, mean, and max of the SAT boxplot are all smaller than those of the ACT boxplot
- One could infer CA seniors would score above the ACT benchmark slightly more often than on the SAT benchmark

Percent of CA Seniors Who Passed ACT Benchmark Score, 2018-19

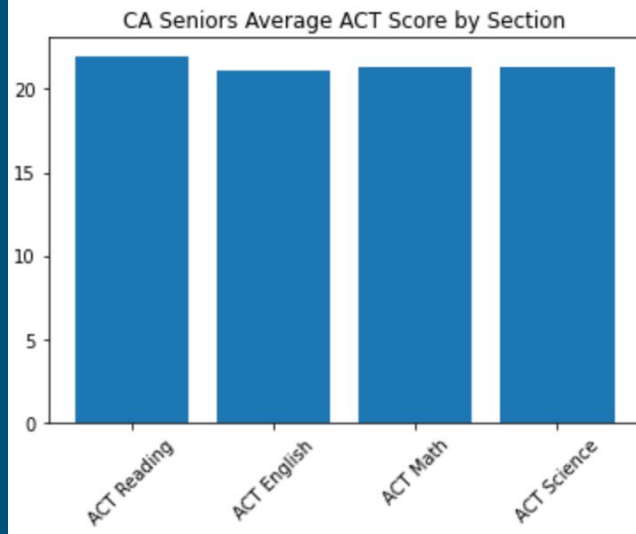
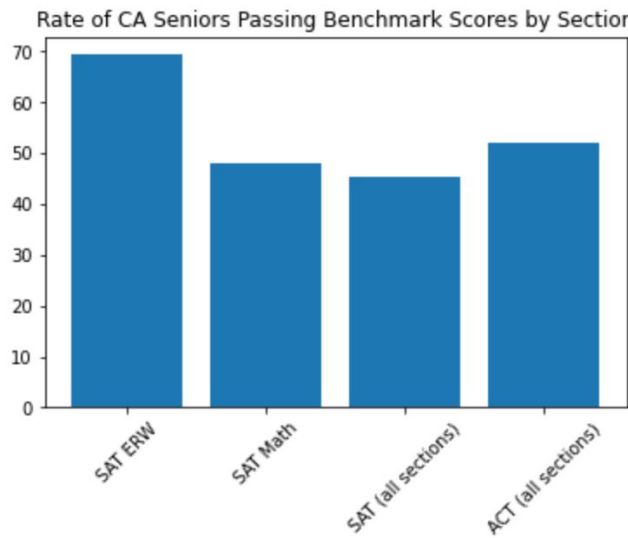


Percent of CA Seniors Who Passed SAT Benchmark Score, 2018-19



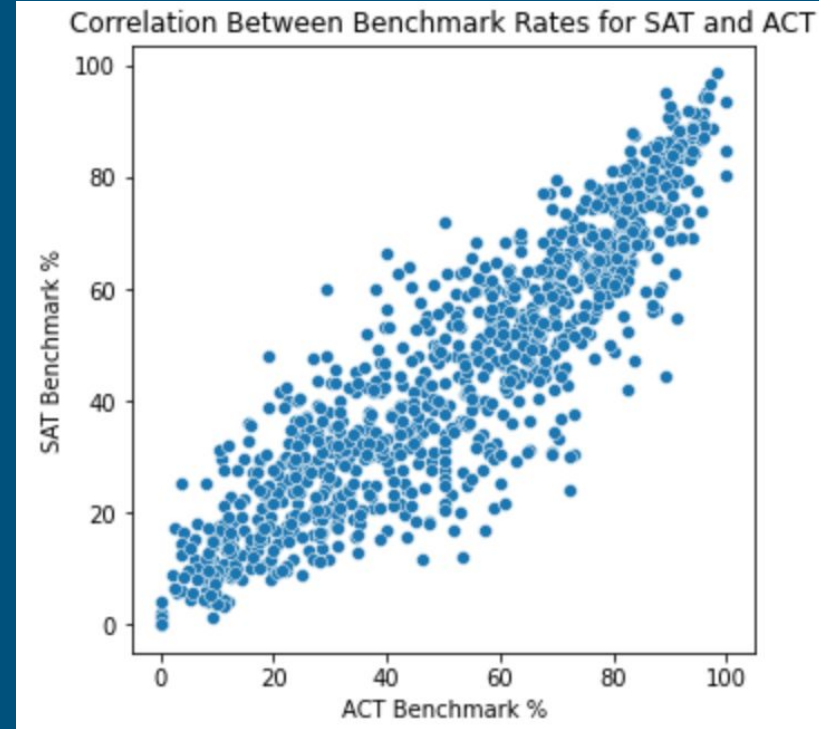
Comparing Test Sections

- 'ACT (all sections)' vs 'SAT (all sections)'
- 'SAT ERW' vs 'SAT Math' -- large disparity
- 'ACT Math' vs the other ACT scores -- small disparity
- This data, combined with the point that ACT has the lower participation of the two tests, suggest that CA should encourage increased ACT participation in its schools.



Potential for test-to-test transferability

- There is a positive correlation between the percent of seniors who passed the SAT benchmark and the percent who passed ACT benchmark
- The correlation demonstrates that in 2018-19, if CA seniors did well on the SAT, they were more likely to get a good score in the ACT



Conclusion

- Key takeaways of California SAT/ACT 2018-19 data analysis:
 - California schools enrolled more of their seniors in the SAT than in the ACT
 - The mean, median, Q1, Q3, and max summary statistic values all show a higher percentage of schools had seniors pass the ACT benchmark vs the SAT benchmark
 - Students struggled more with SAT Math than with ACT Math when compared proportionately to those tests' other sections
- In conclusion, California should focus on raising the ACT participation rate among its schools and devote more curriculum time to math training. These changes will likely raise overall benchmark achievement rates for seniors across the State.