

California ACT + SAT Analysis

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Problem Statement

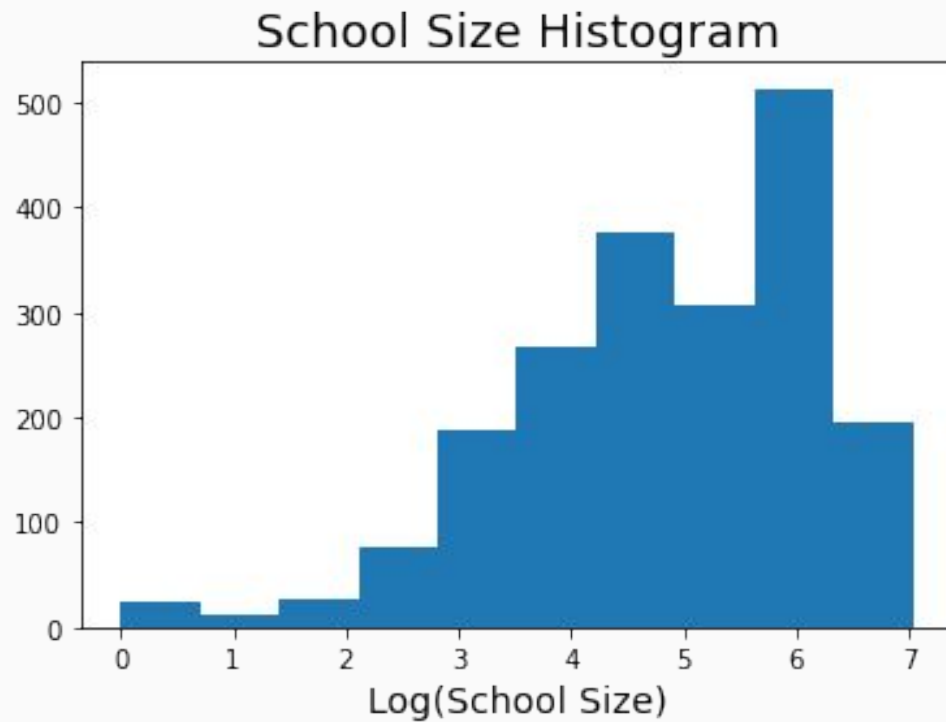
To understand the prevalence of the ACT + SAT among California high school students:

- Testing rates
- Testing performance

Background

- ACT + SAT
- Dataset
 - Public high schools
 - School, district, county, and statewide levels
 - 2018 - 2019

Average School Size



Contrasting ACT vs SAT

ACT

- 83,000 tests taken
- Graded 1 - 36 on 4 sections, median score 21
- Aggregate performance metric - average composite + percent above 21

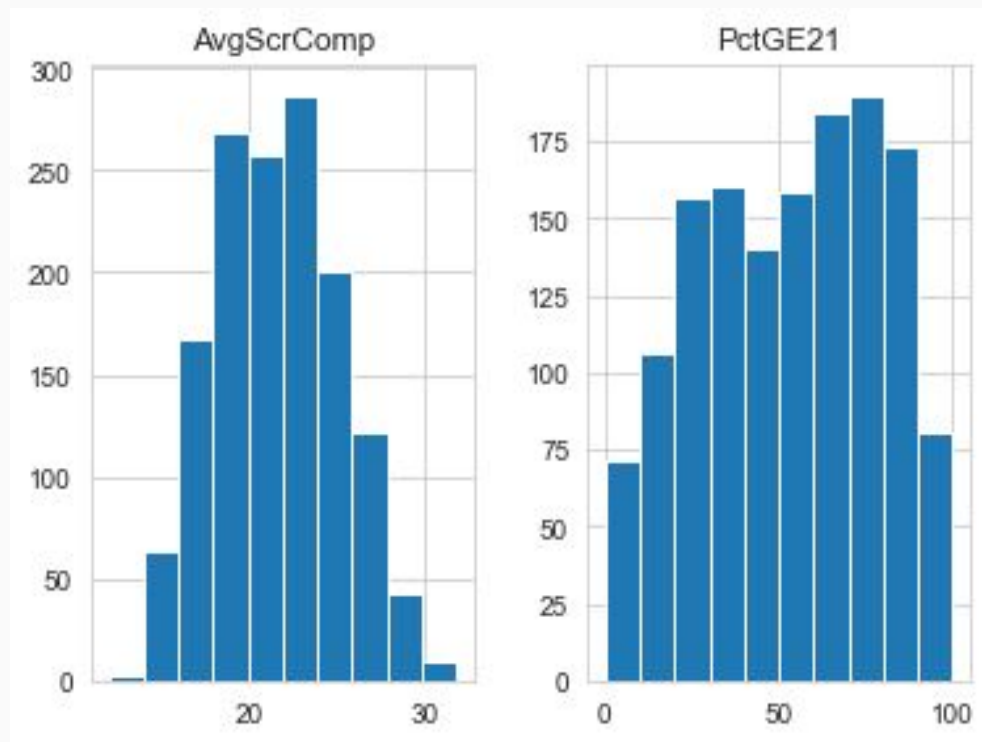
SAT

- 207,000 tests taken
- Graded 400 - 1600, benchmarks published by College Board
- Aggregate performance metric - percent meeting benchmark

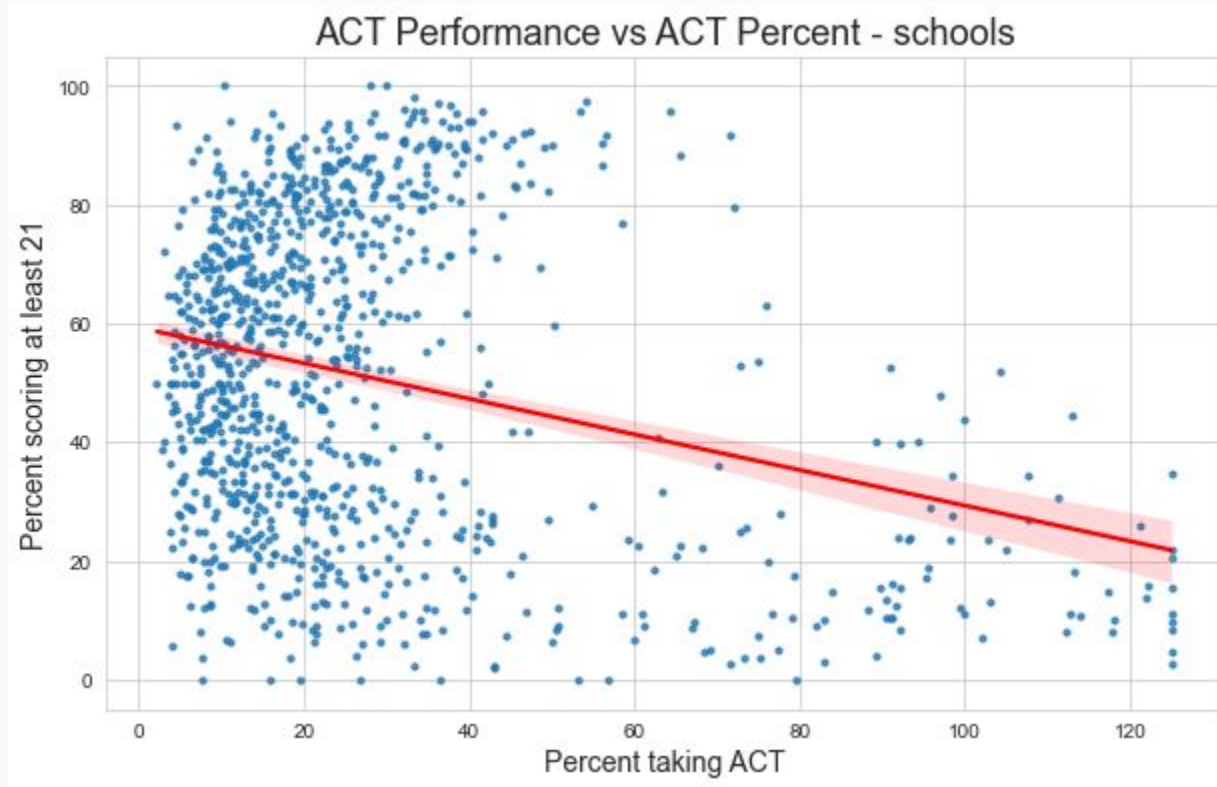
High Testing Rate Schools

- Counties in bay area (San Francisco, Marin, Alameda, Santa Clara)
- Charter schools

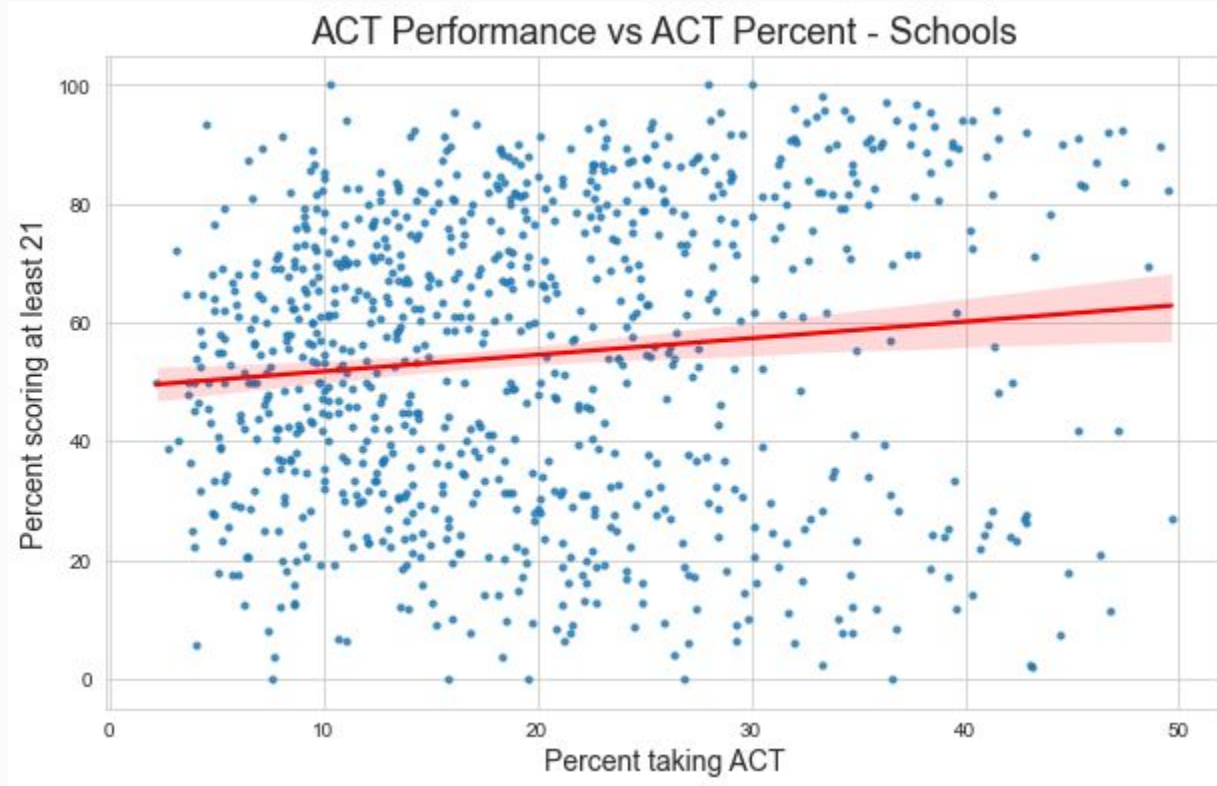
ACT Performance Metrics



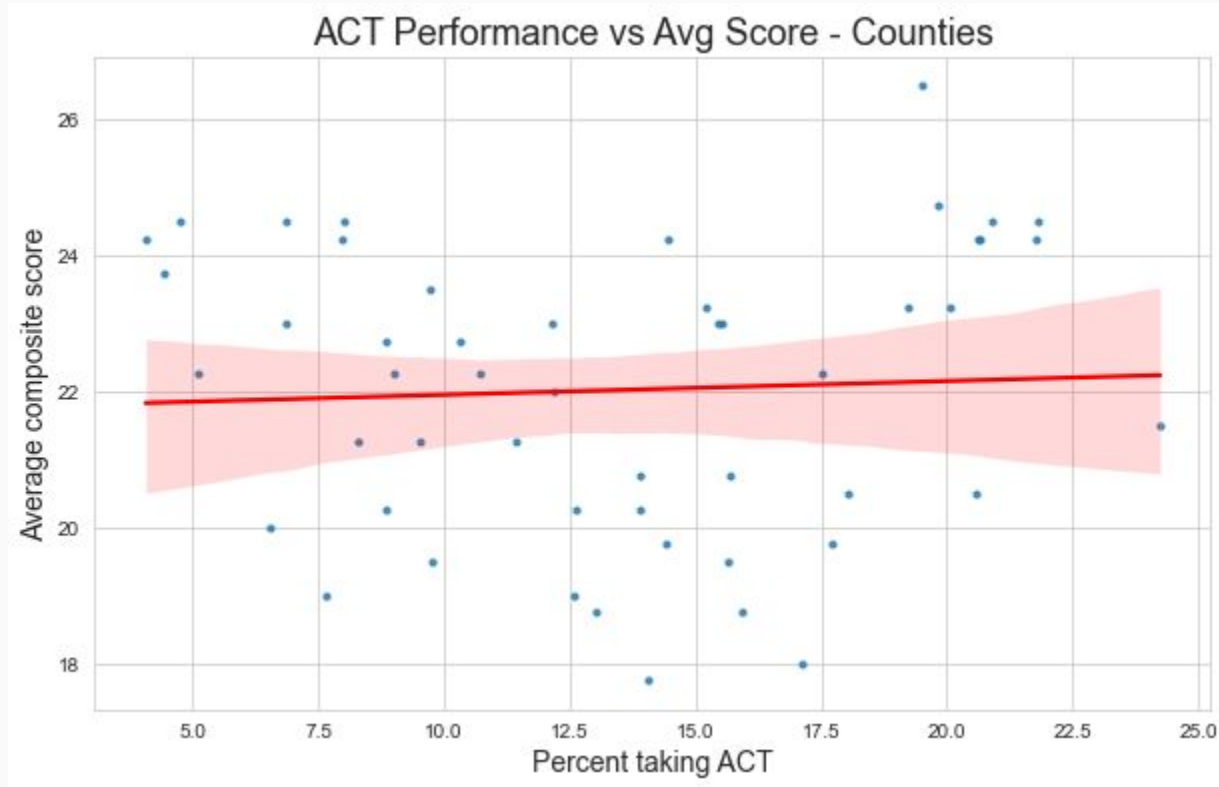
ACTs test-taking rates vs test performance



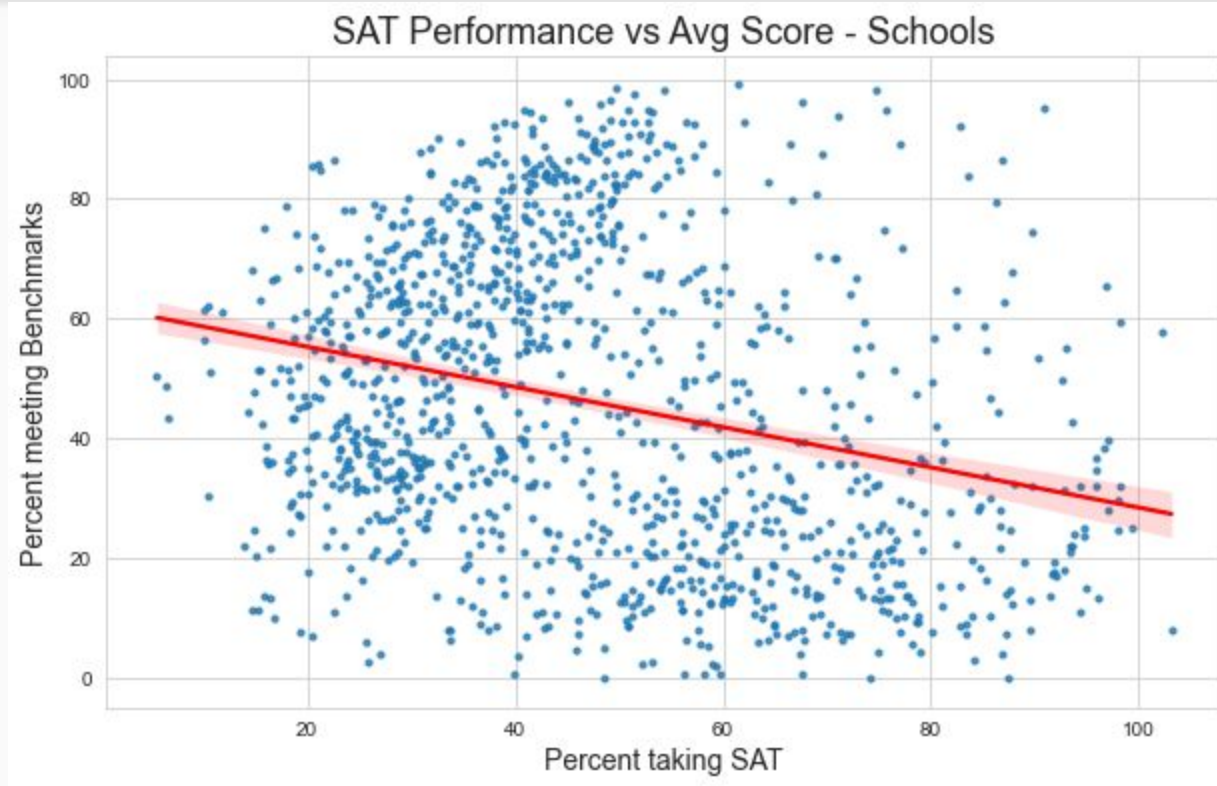
ACTs test-taking rates vs test performance - participation cutoff



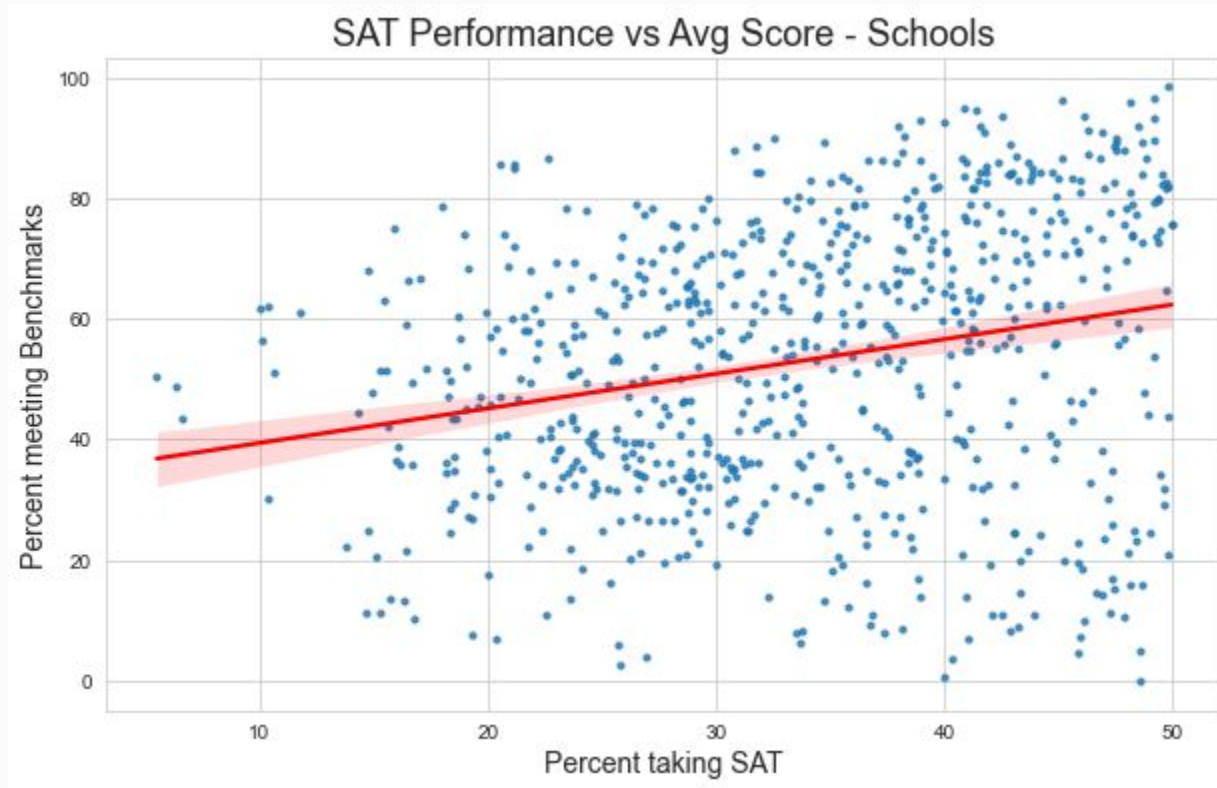
ACTs test-taking rates vs test performance - Counties



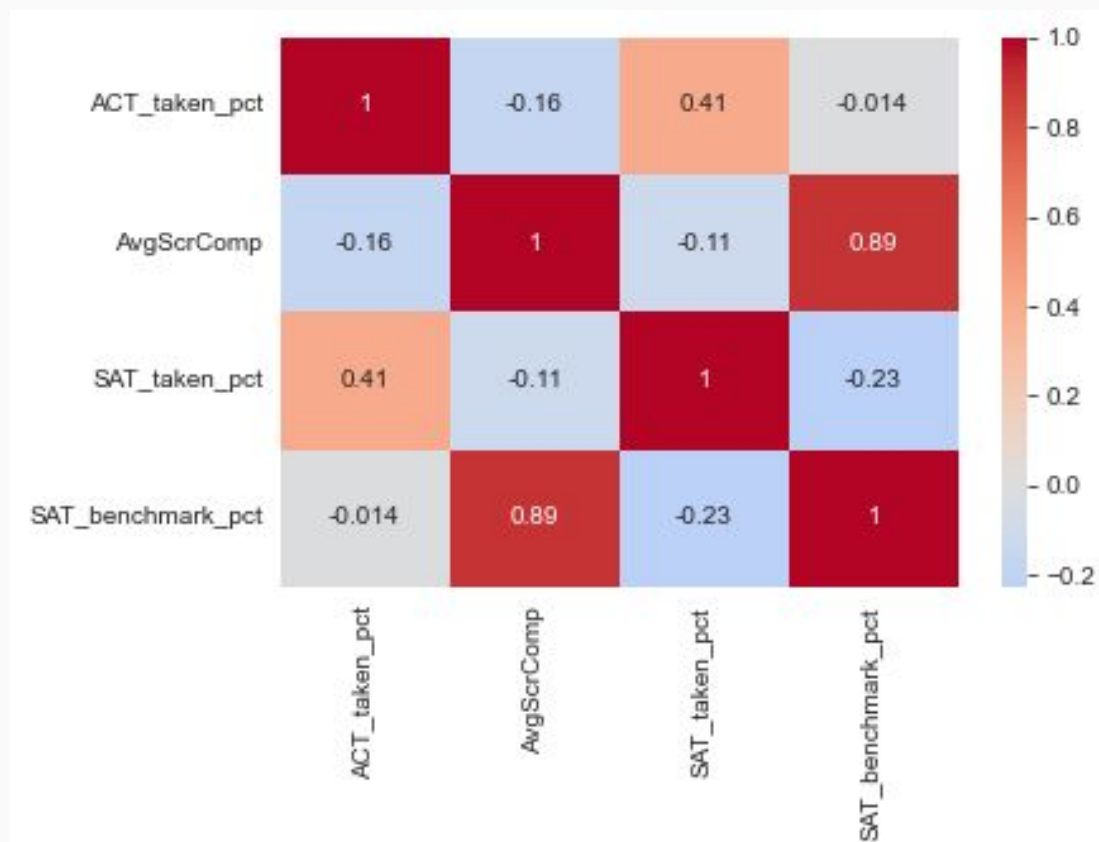
SATs test-taking rates vs test performance



SATs test-taking rates vs test performance - cutoff



ACT + SAT Heatmap



Conclusions

- SAT and ACT have similar patterns
- Full school data has negative association between participation and success
- Removing schools with very high test rates reverses association
- SAT and ACT scores are correlated across schools but participation is not