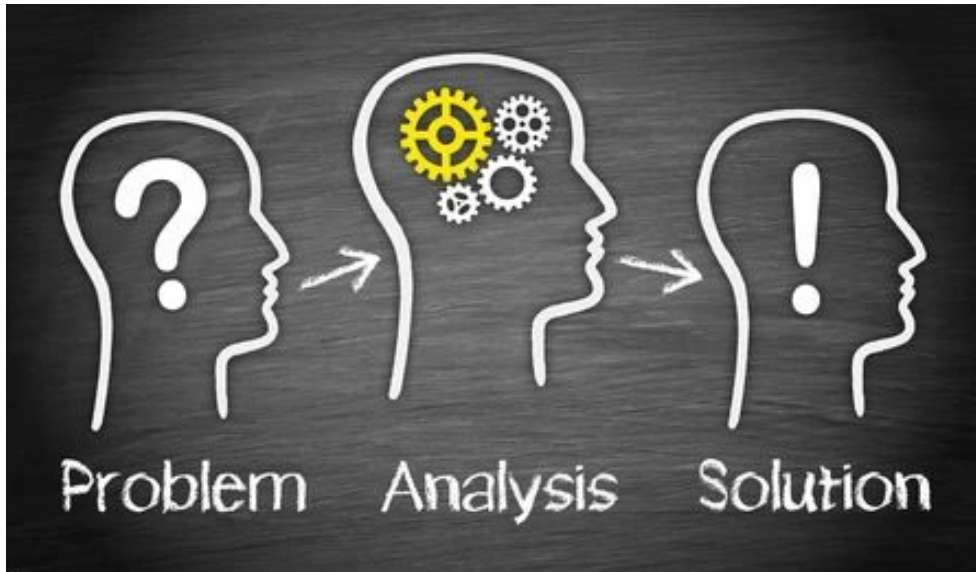


Project 1: SAT & ACT Analysis

Geh Si Rong
General Assembly DSI 20

Problem Statement

- What insights can be gleaned from the 2017 and 2018 SAT / ACT datasets?
- How can we use this data to boost SAT participation rates?



Data Exploration

2017 & 2018 SAT and ACT data sets for US States

- **SAT & ACT Participation Rates**
- SAT Individual Subject Scores:
 - Evidence-based Reading & Writing (ERW)
 - Math
- SAT Total Scores
- ACT Individual Subject Scores:
 - English
 - Math
 - Reading
 - Science
- ACT Composite Scores

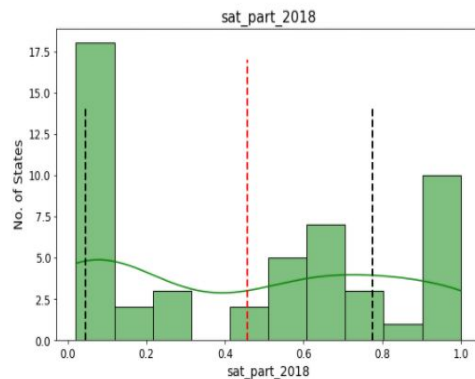
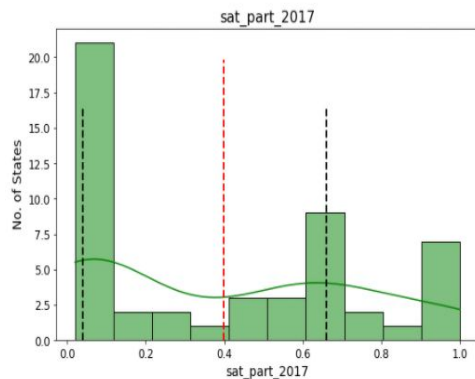


Research Methodology

- Exploratory Data Analysis
- External Research
- Recommendations

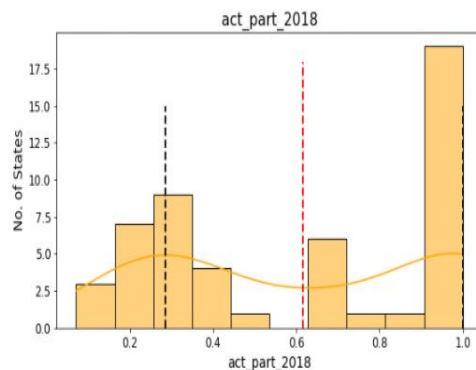
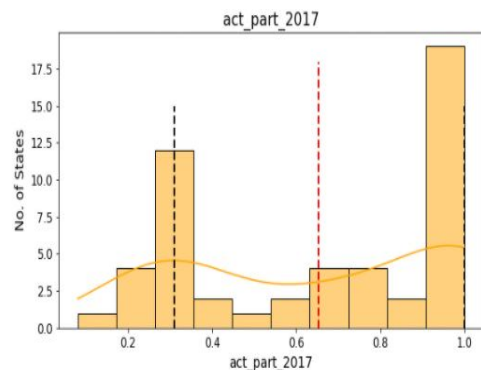


SAT vs ACT Participation Rates



Observations:

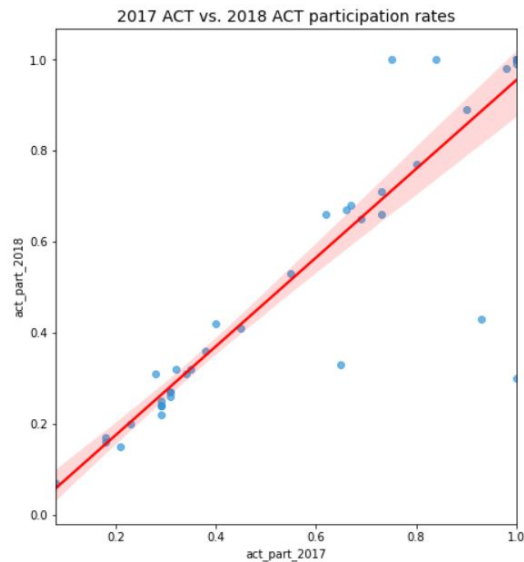
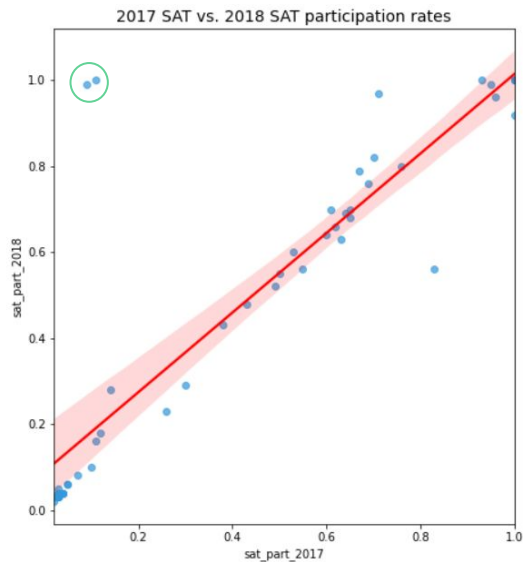
- Similar distributions year-on-year
- Highly concentrated around extremely high participation rates (>90%) and low participation rates (<10%)
- SAT: Significant number of states with low rates
- ACT: Significant number of states with high rates



Promising signs:

- Notable increase in SAT rates from 6 to 10
- Median: Increase in SAT vs decrease in ACT

SAT vs ACT Participation Rates



Observations:

- Strong positive correlations between participation rates in both plots
- Expected as states
- Distinct outliers in 2017 vs 2018 participation rates - Colorado and Illinois

But data doesn't lie...



...or does it?



External Research - Law of the land

Colorado:

- Mandatory switch from ACT to SAT from 2017
- SAT participation rates surged from 11% to 100%
- ACT participation rates fell from 100% to 30%
- Fee waivers for SAT
- High rates for both tests in 2018
 - High achievers
 - Morale boost

External Research - Law of the land

Illinois:

- Mandatory switch from ACT to SAT from 2017
- SAT participation rates rose from 9% to 99%
- ACT participation rates fell from 93% to 43%
- Fee waivers for SAT
- High rates for both tests in 2018
 - Schools and institutions required time to switch

RECOMMENDATIONS



Recommended State - Oregon



Recommended State - Oregon

- No legal requirements to take either SAT or ACT
- SAT participation rate: 48%
- ACT participation rate: 42%
- Mild preference of SAT over ACT
- 48% closer to 'psychological level of resistance'

Recommended State - Oregon

- Mandate SAT statewide
- Full or partial coverage of exam fees
- Scholarships for students with exemplary scores
- Subsidised test preparation programs

THANKS
A BUNCH!

