

# Project 1 : Standardized Test Analysis

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# Table of Contents

1. Problem Statement
2. Methodology & Data
3. Analysis
4. Conclusions
5. Recommendations

# **Problem Statement:**

**Hired by the College Board, we aim to research the best areas to focus resource allocation in order to increase participation rates on the SAT**

## Data Researched:

**SAT (2017-2018)**

**ACT (2017-2018)**

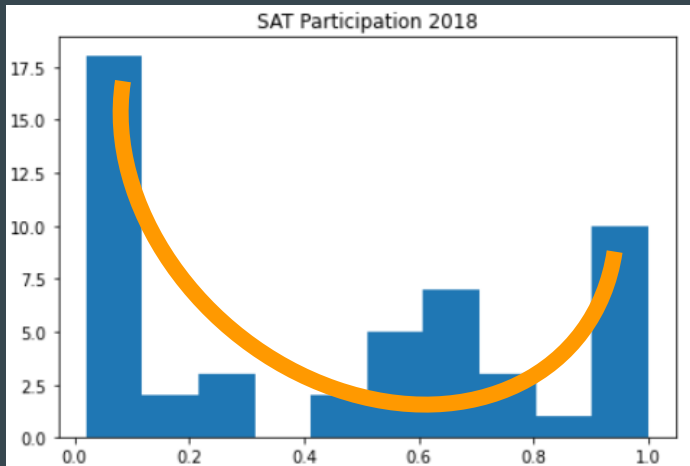
## Factors researched:

**Participation Rates**

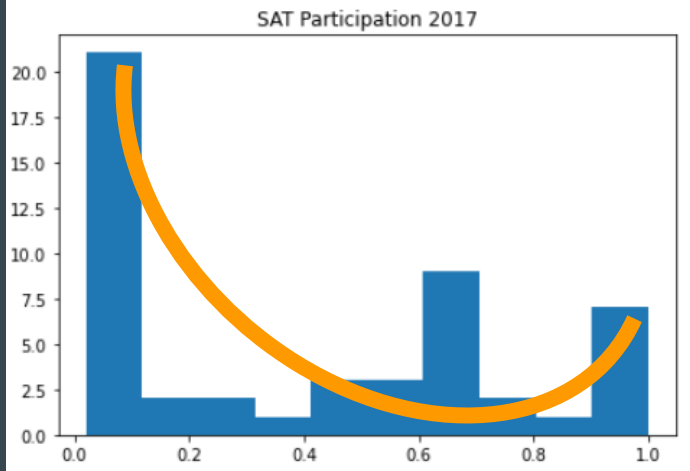
**Average section scores**

**Average total/composite scores**

Number of states



Number of states



Participation rate

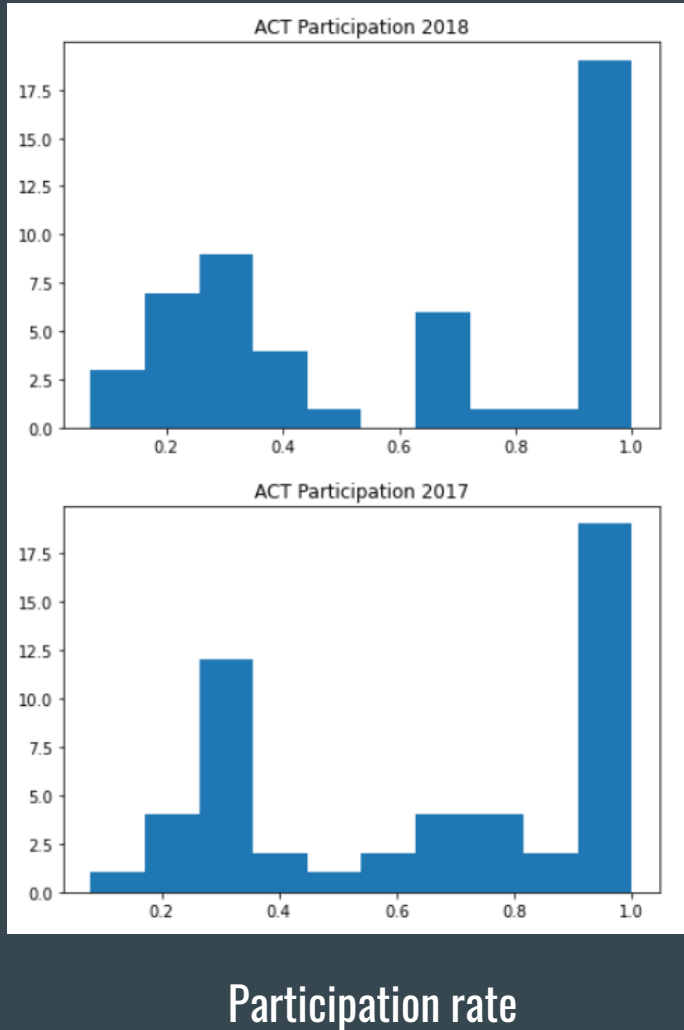
# Analysis

## SAT participation rate findings

1. “U” Shaped - participation across states swing between extremes
1. More states lean towards low extreme rather than high

Number of states

Number of states

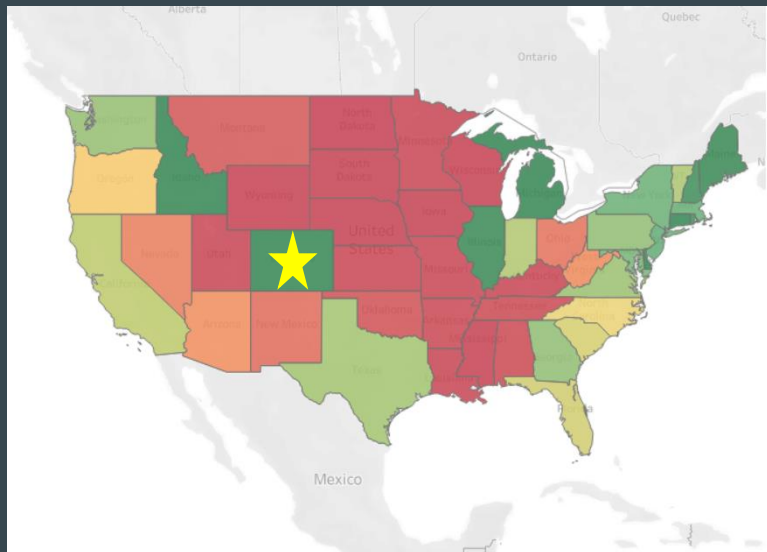


# Analysis

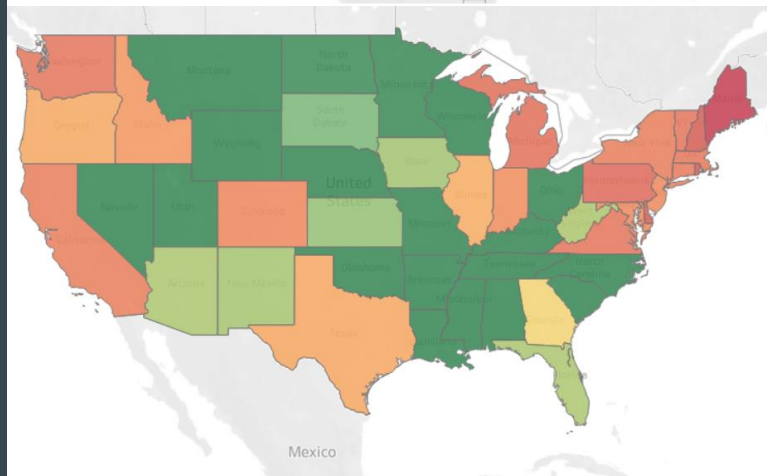
## ACT participation rate findings

1. Non-U shaped - states with low participation rates ( $< 50\%$ ) hovered around 25%.
1. More states lean towards high extreme rather than high

SAT 2018



ACT 2018



High  
participation

# Analysis

## SAT participation rate

States with high participation tend to be concentrated in states close to the coast, however the trend seems to be changing with the SAT gaining ground inland as well.  
(i.e Colorado \*)

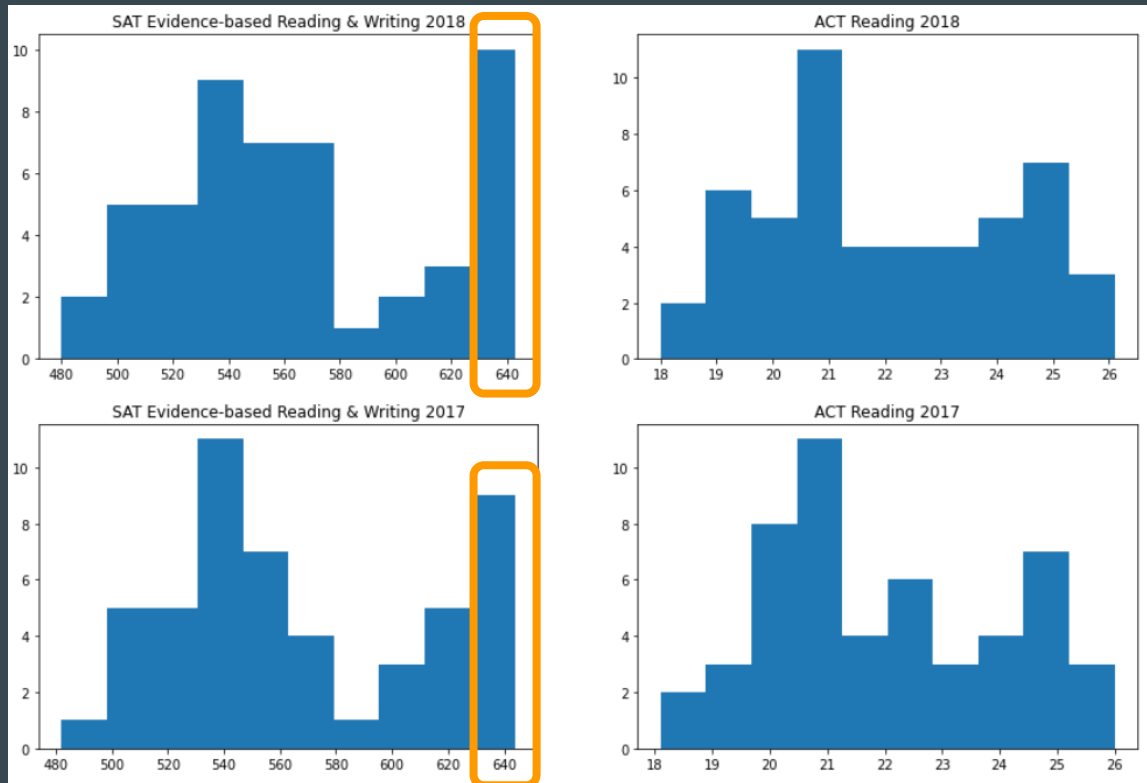
## ACT participation rate

States with high participation tend to be concentrated in states further from the coast

Low  
participation

Number of states

Number of states



Section Scores

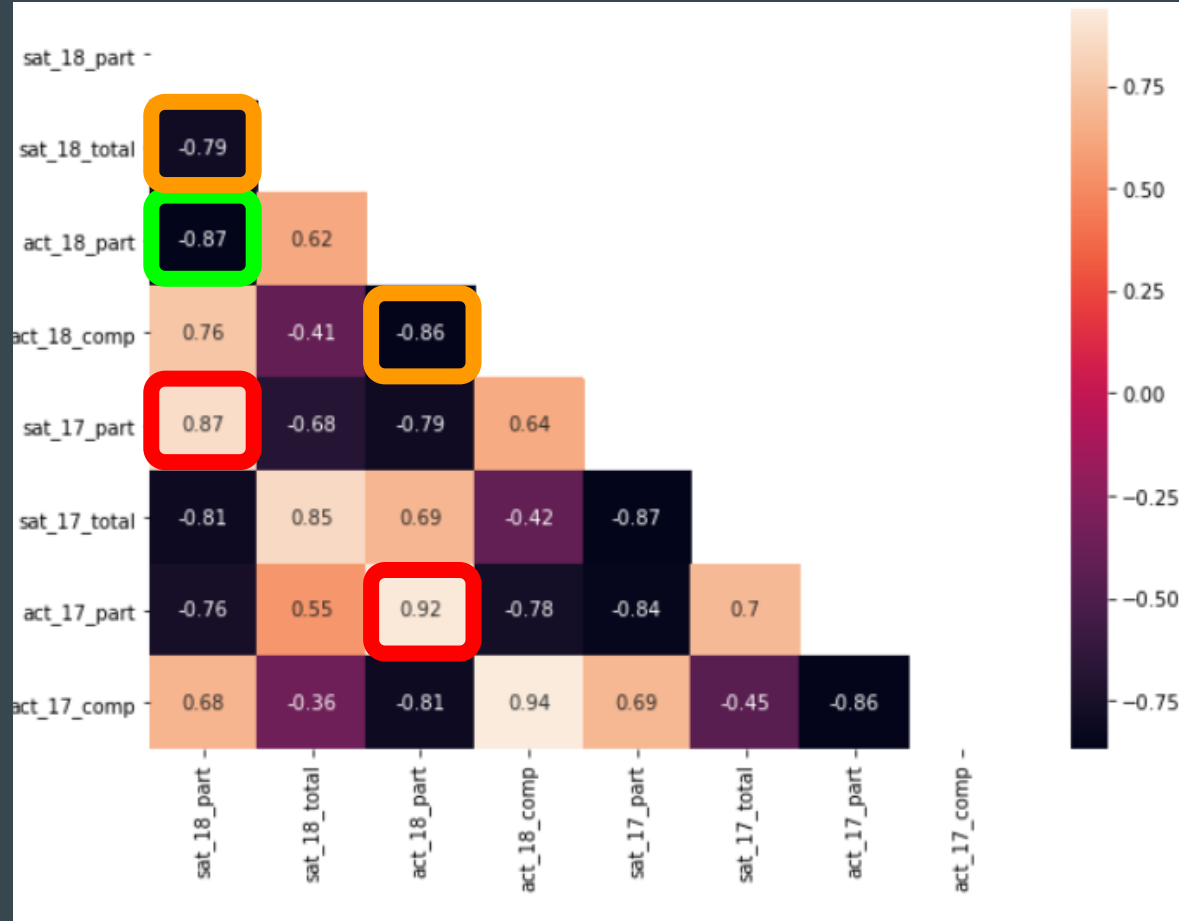
# Analysis




## ACT section score findings

Many states performed exceptionally well for the SAT test, seen in the high number of states placed the highest score. This trend was not reflected in the ACT.



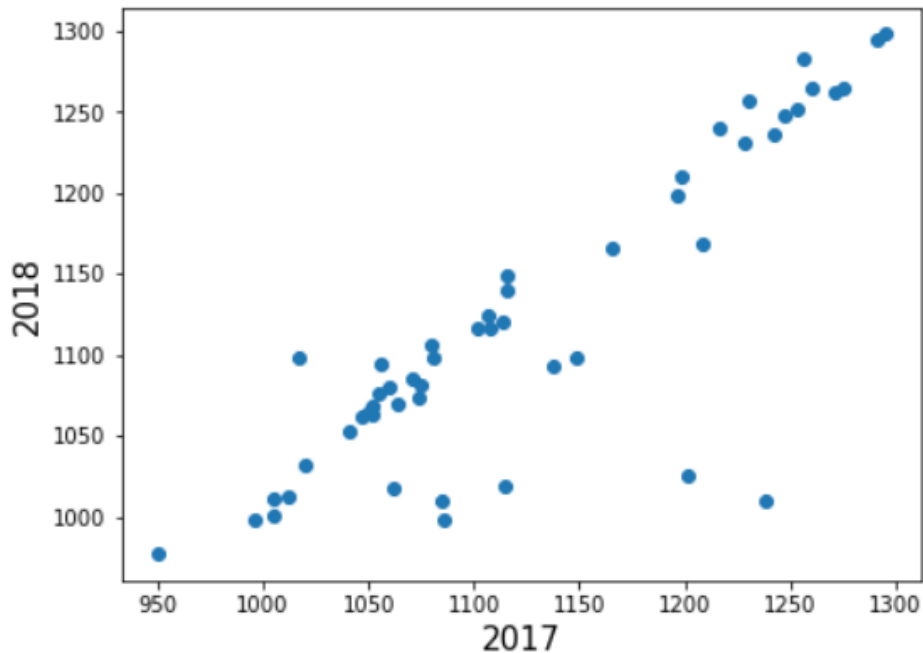
# Analysis



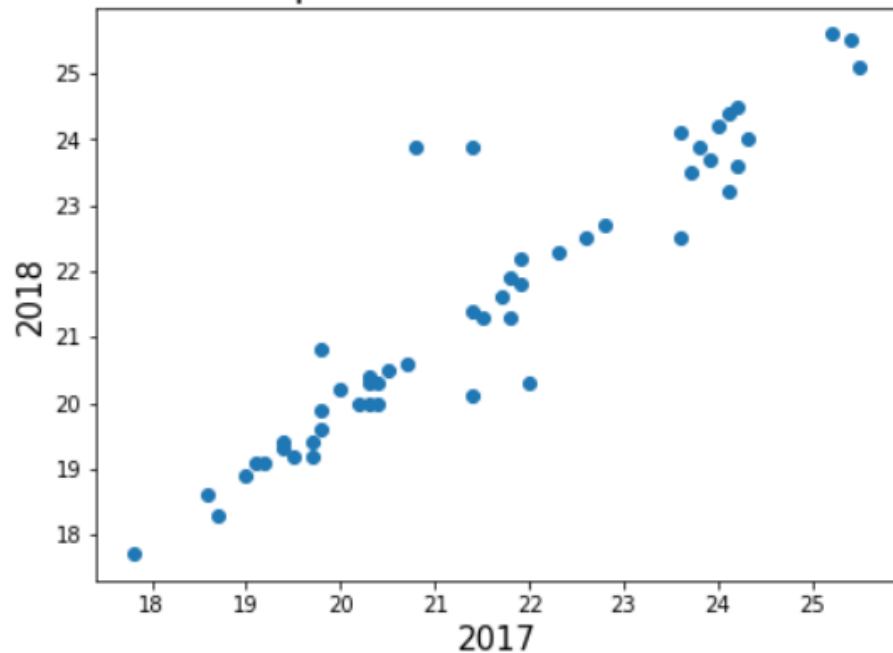
-  Negative correlation between tests participation. High participation in one test result in low participation in the other
-  Negative correlation between scores and participation. As participation increases, scores decrease.
-  Positive correlation between 2017 and 2018 participation. High in 2017 = High in 2018

# Analysis

SAT Total Scores: 2017 vs 2018



ACT Composite Scores: 2017 vs 2018



Strong positive correlation between 2017 and 2018 scores for both test. High in 2017 = High in 2018

# **Findings :**

**From our analysis, did we identify any states with large improvements in participation rates?**

A wide-angle photograph of the Chicago skyline at dusk or dawn. The Chicago River flows through the center of the frame, with a red steel truss bridge crossing it. In the background, the Willis Tower stands out among other skyscrapers. The sky is a pale blue with soft orange and yellow light from the setting or rising sun. The text 'Case Study 1 : Illinois' is overlaid in a bold, black, sans-serif font on the left side of the image.

# **Case Study 1 : Illinois**

Recently clinched a contract for 3 years worth \$14.3 million to provide SAT exams to all public high school juniors

Came after a 15 year contract expiry between ACT and Illinois



After contract  
signing

SAT participation (2017)

9%

SAT participation  
(2018)

99%

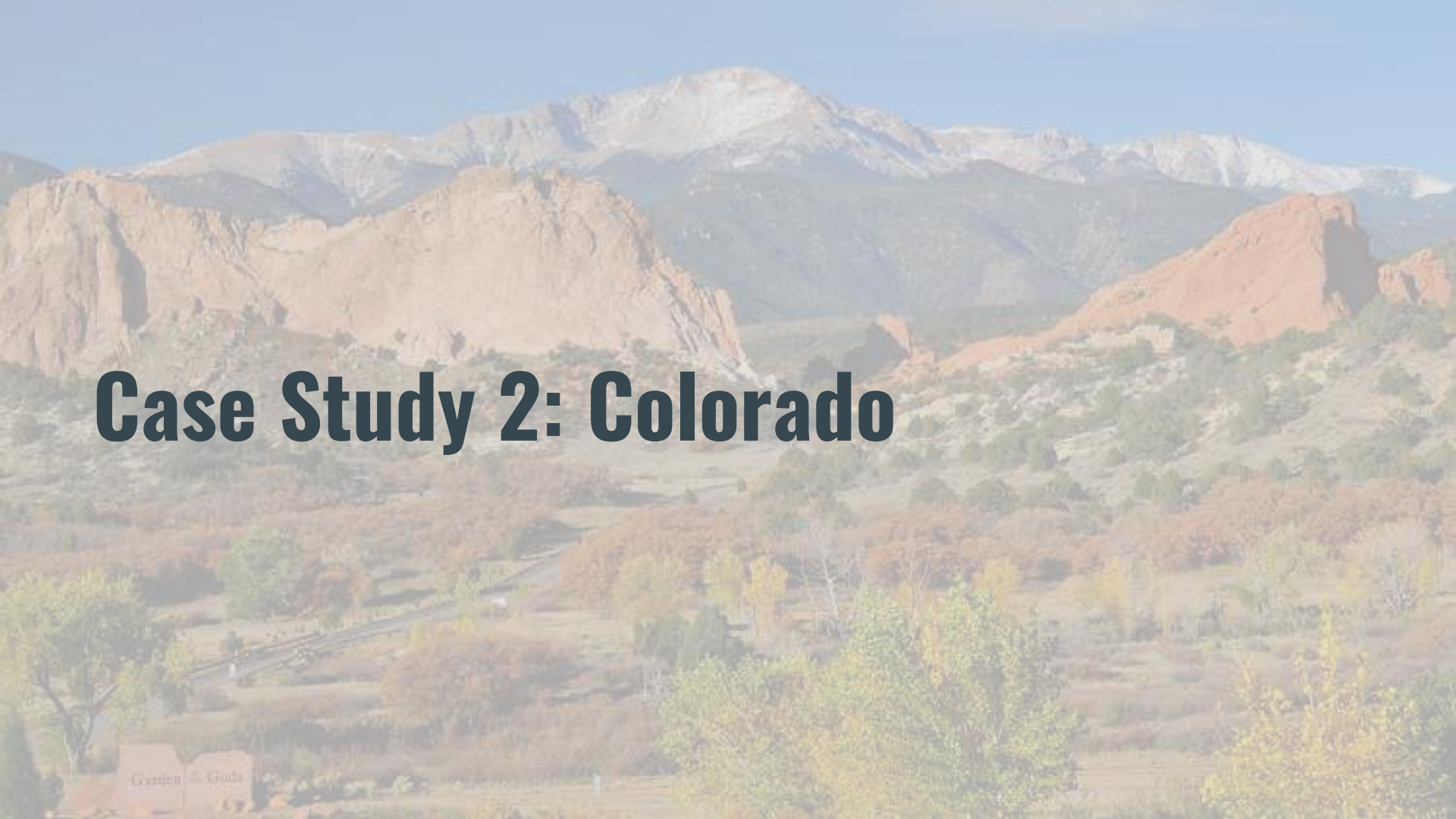
Costs for test takers will be absorbed by schools

Students are allowed to take the SAT on weekdays

Sources:

<https://testive.com/illinois/>

<https://www.chicagotribune.com/news/ct-illinois-chooses-sat-met-20160211-story.html>

A scenic landscape of Colorado featuring rugged mountains with patches of snow in the background. The midground shows steep, reddish-brown cliffs. The foreground is filled with trees displaying vibrant autumn foliage in shades of orange, yellow, and green. A road and some buildings are visible in the lower left.

# **Case Study 2: Colorado**

Similar circumstances to that of Illinois with the College Board signing a new contract, making the SAT test mandatory

Came after a 15 year contract expiry between ACT and Colorado



After contract  
signing

SAT participation (2017)

11%

SAT participation  
(2018)

100%

Costs for test takers will be absorbed by schools

Students are allowed to take the SAT on weekdays

Sources:

<https://www.testive.com/colorado-sat-change-2017/>  
<https://www.denverpost.com/2017/03/06/colorado-juniors-sat-college-exam/>

# What were the factors that led to success?

States with no contracts/  
Contracts expiring soon

- These states are prime for the College board to approach

High scoring

- A state with high scorers reflect high motivation to do well

Geographically  
bordering/ close

- State should preferably be bordering or close to states which have high participation rates



The background of the slide is a photograph of the Mount Rushmore National Memorial. The four large granite faces of the presidents—George Washington, John Adams, Thomas Jefferson, and Abraham Lincoln—are visible, carved into the light-colored rock of the mountain. The sky above is a clear, pale blue. At the bottom of the image, some dark green evergreen trees and a small building can be seen at the base of the mountain. Overlaid on the center of the image is the text "Next steps: South Dakota" in a bold, dark blue, sans-serif font.

**Next steps: South Dakota**

# Why South Dakota?

1. There is currently no mandatory testing for either the SAT or ACT.
2. There is high participation rate for SAT (77%) despite not having any mandatory testing, this shows that the state has very motivated test takers.
3. South Dakota test takers fared better than the national average.
  - As there is fairly large deviation among high scorers, this may allow high scorers to better distinguish and put themselves ahead for college applications.

Sources:

<https://www.act.org/content/dam/act/unsecured/documents/cccr-2019/South-Dakota-CCCR-2019.pdf>

# How do we approach South Dakota?

Provision of test subsidies

- Modelling successes in Colorado and Illinois, we should provide test subsidies for test takers to encourage them to participate.

Additional resource for test takers

- Partnership with Khan Academy allowing students to practice for SAT anywhere with internet connection.
- Consistent updated resources always available

Advanced placement courses (PSAT)

- Qualifies test takers for merit based scholarships. Alleviating college education cost concerns for students held back by financial woes.

Geographically bordering/ close

- South Dakota is relatively close to Colorado and Illinois which have seen recent success working with the College Board.

Sources:

<https://www.denverpost.com/2017/03/06/colorado-juniors-sat-college-exam/>  
[https://www.nasfaa.org/news-item/11623/Report\\_Low-Income\\_Students\\_Cannot\\_Afford\\_95\\_Percent\\_of\\_Colleges](https://www.nasfaa.org/news-item/11623/Report_Low-Income_Students_Cannot_Afford_95_Percent_of_Colleges)