DSIF4 Project 1: Standardized Test Analysis

Mubin Khan
Joel Tan
Andre Tan

Team Le Le

"Change is inevitable
except from a vending machine."

Robert C. Gallagher

SAT	Overall Performance in Minnesota	Task

Created in 1926 by the US College Board as an university admission test.[1]

Year 2017 : Among the highest average scoring state with score of **1295**.
Year 2018: Increase in average score to **1298**.
Common factor: Low participation rate ranging from **3% to 4%**.

As members of the College Board in charge of the Northern states, we have been tasked to make recommendations for the improvement of SAT participation rates.

PROBLEM STATEMENT

How the College Board might work to increase the SAT participation rate in Minnesota based on 2017 & 2018 data?
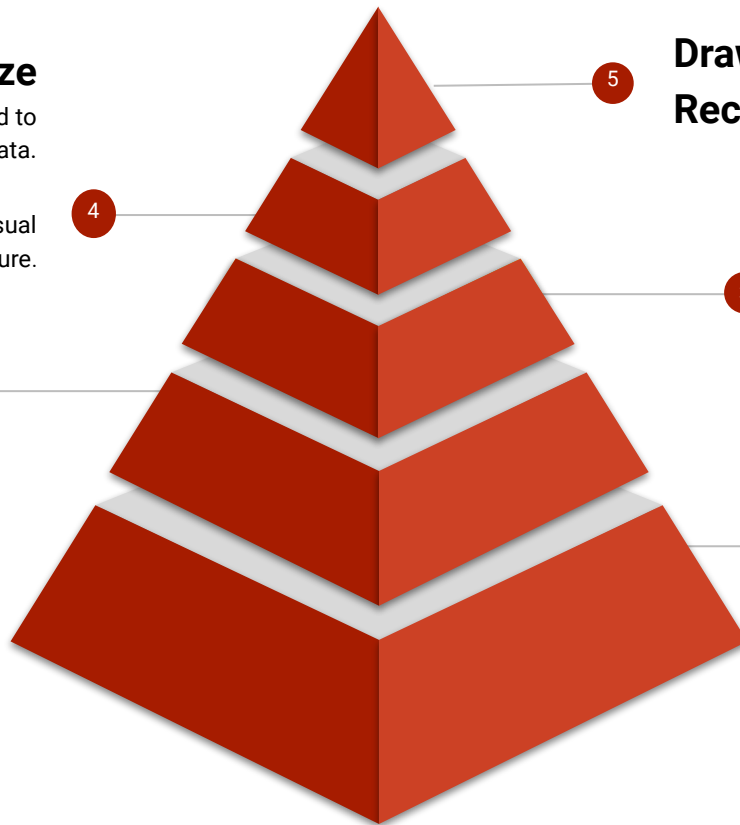
Procedural Pyramid

Analyze and Visualize
Perform analysis techniques that lead to draw conclusions from polished data.

Leverage preattentive attributes in visual perception to get the bigger picture. — 4

Combing/Error Checking — 2

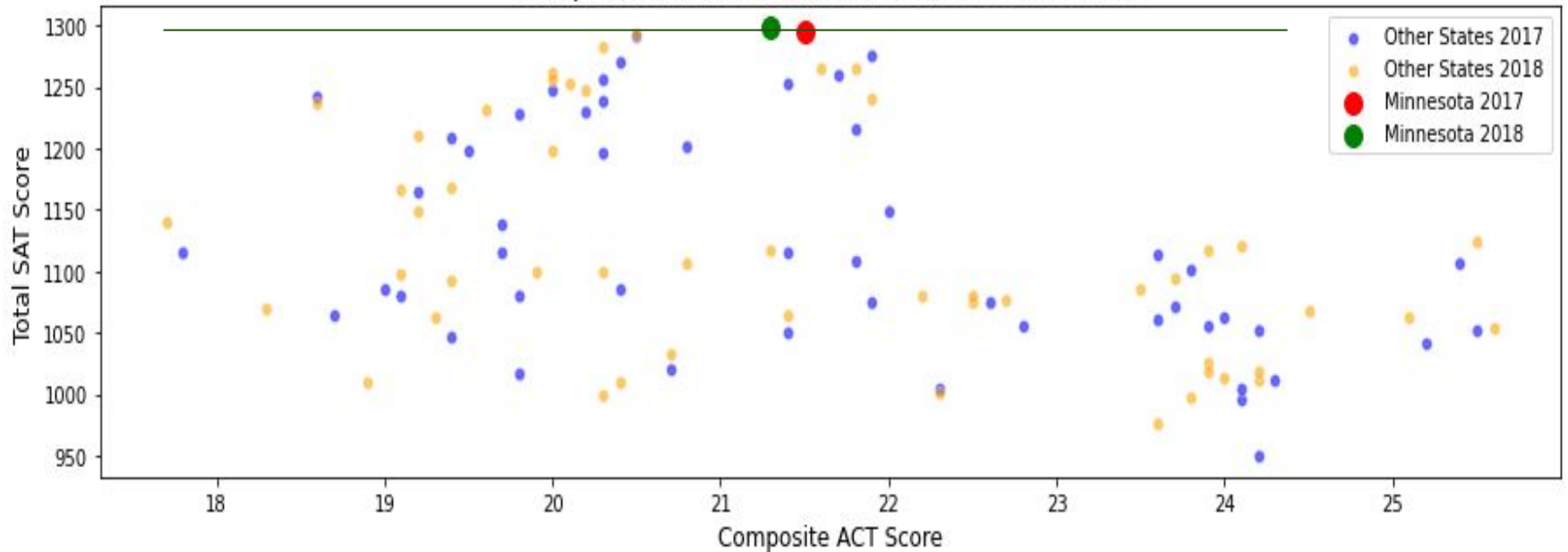5 — **Draw Conclusions & Recommendations**

3 — **Modify Data**
Produce 'tidy', analysis-ready datasets to ensure analysis is error free.
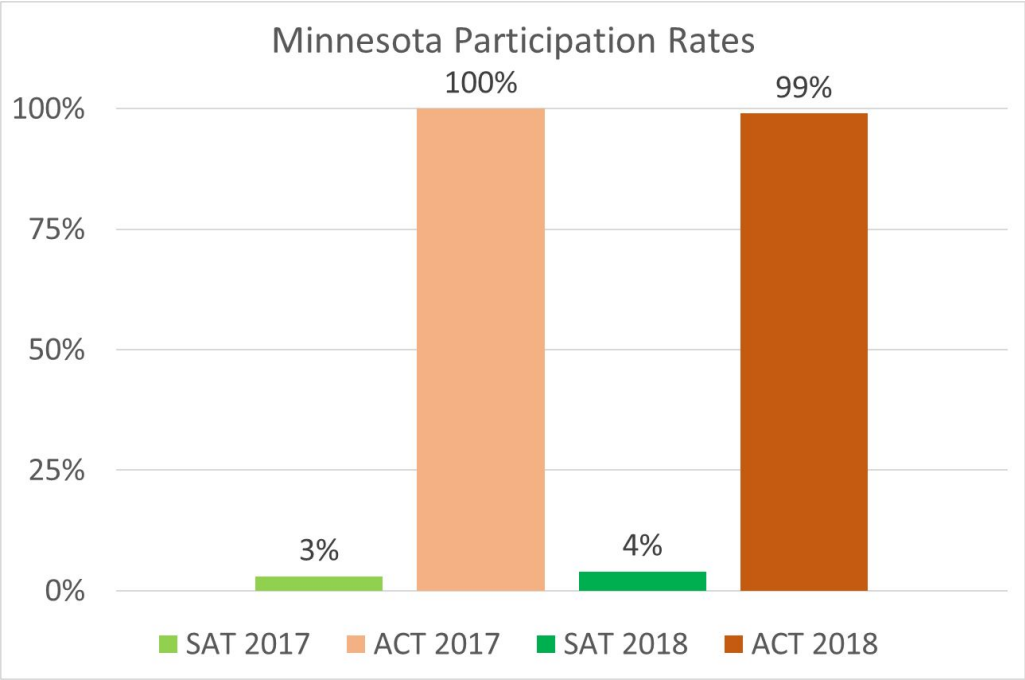
1 — **Download Raw Data**

Visualization

Minnesota tops the SAT cohort in 2017 & 2018
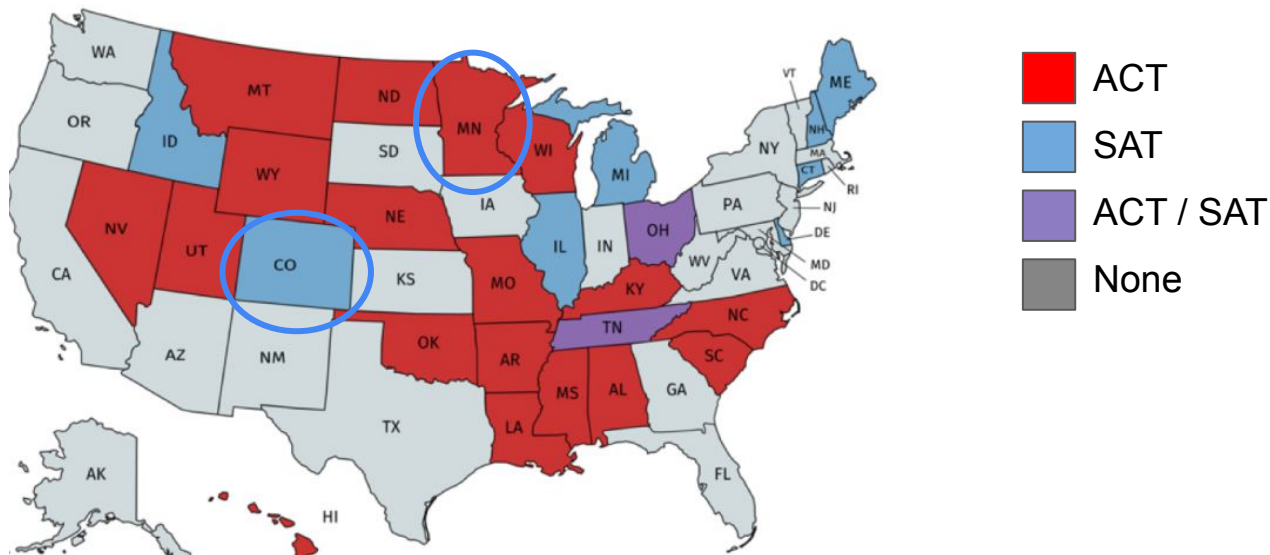
Visualization

However, SAT participation in Minnesota is lacking

Visualization

Map of states which require ACT / SAT

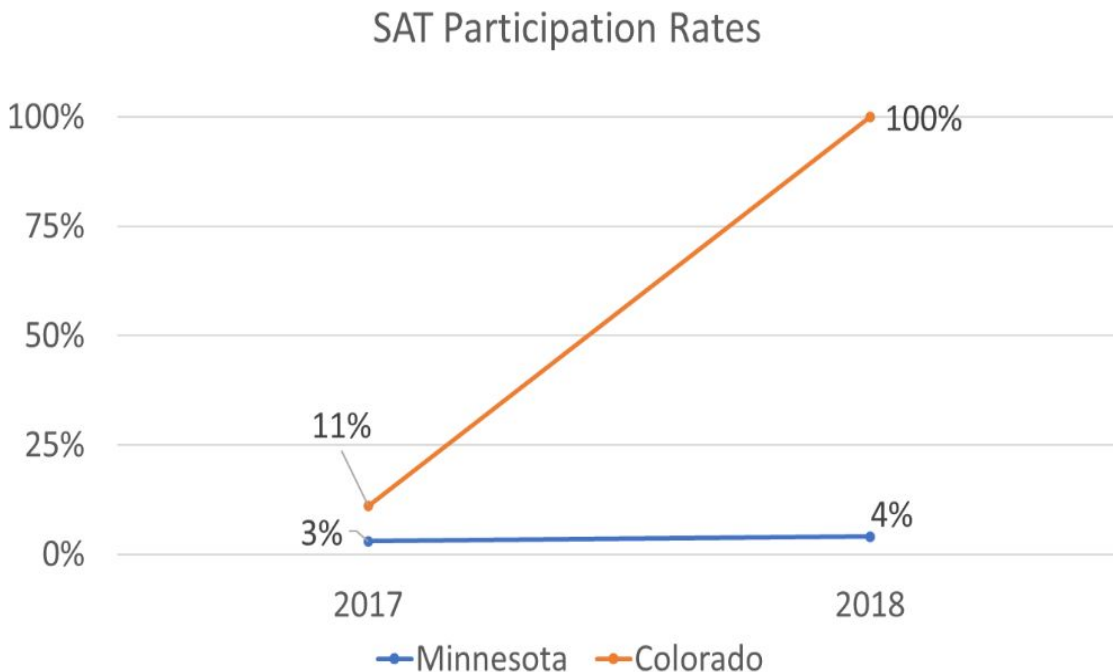# Visualization

Map of states which have School Day testing

ACT
SAT
ACT / SAT
None

Case Study: Colorado

Colorado managed to drastically improve SAT participation

- SAT was mandatory in 2018
- Full sponsorship for SAT

SAT Participation Rates

100%

75%

50%

25%

0%

11%

3%

4%

100%

2017   2018

Minnesota   Colorado

Case Study: Colorado

Unintended Cost: Colorado SAT average scores dropped with increased participation.

From an average SAT test score of 1200 in 2017 it dropped to 1050 in 2018.

Composite ACT vs Total SAT scores 2017 & 2018
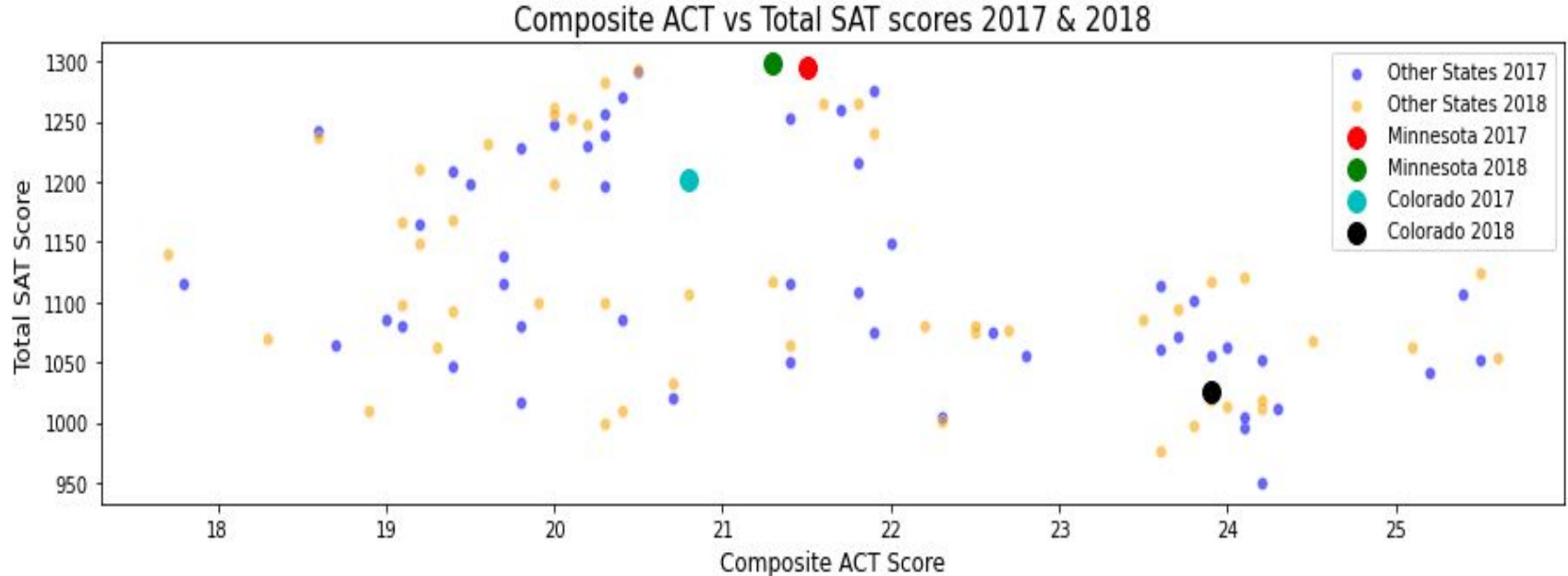
Conclusion

2017 and 2018, the state of Minnesota had one of the lowest participation rates at 3% - 4 %. To help improve the participation rates, We looked at the state of Colorado because they were able to increase the participation rate by over 700% within a year.

Some recommendation we have from researching what Colorado did:

A. Make SAT mandatory
B. Enable School Day testing
C. Sponsor test fees

To mitigate the by product of the drop average SAT test scores we suggest that the state could implement these ideas at the same time:

A. Improve student's access to study materials
B. Impose a fee for retests, as a negative reinforcement

Q&A