PROJECT 1:

An analysis of standardised tests

Maryam

GA-DSI-33

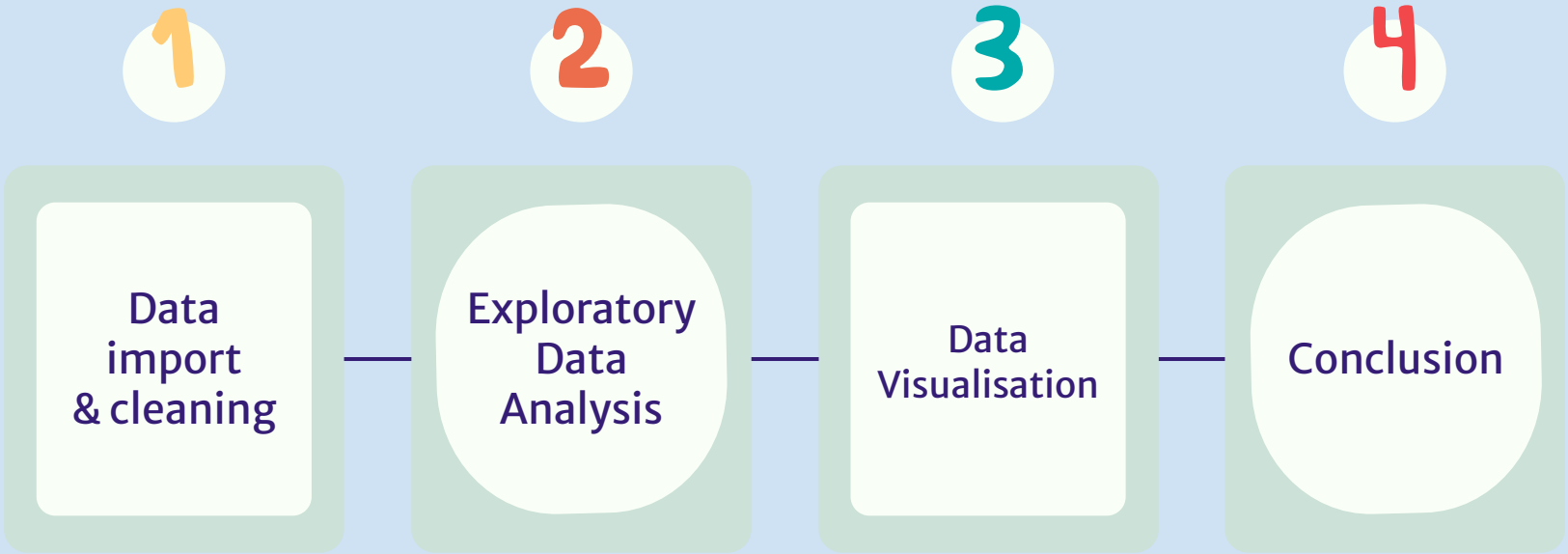
PROBLEM STATEMENT

You work for the ACT inc, the board that administers an entrance exam used by most colleges and universities to make admissions decisions.

ACT participation rates are falling year-on-year, while the SAT participation rates are increasing. Since students intending to attend college/university in the United States can choose to sit for either the SAT or the ACT, the company is concerned. It aims to use your analysis to implement data-driven solutions in order to achieve improvement in the ACT participation rates in the coming year.

Your presentation and report should be geared toward non-technical executives of ACT inc and you will use the provided data and outside research to make recommendations about how the company might work to increase the participation rate in a state of your choice.

Workflow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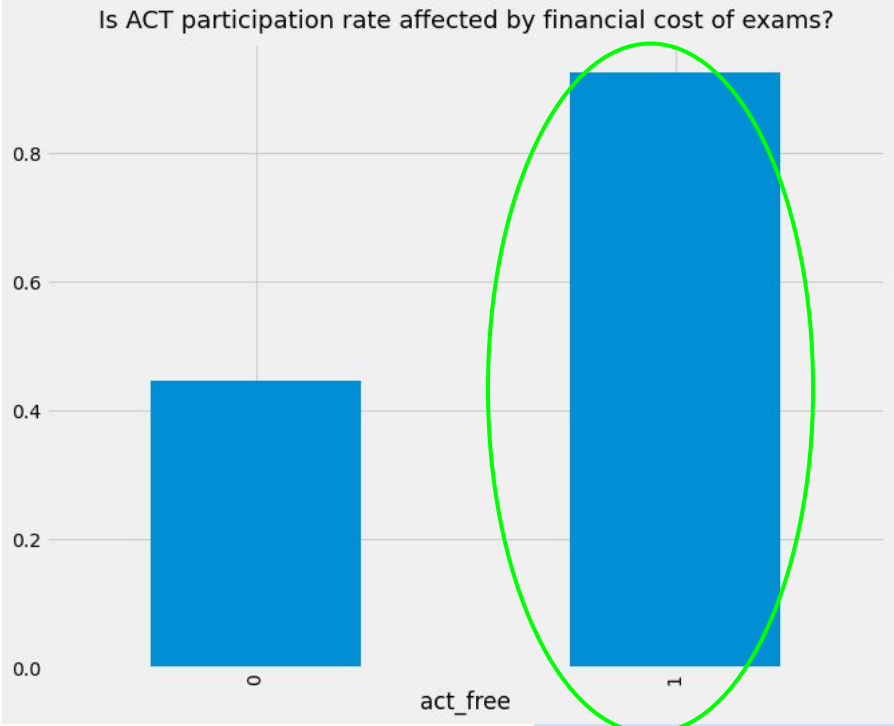
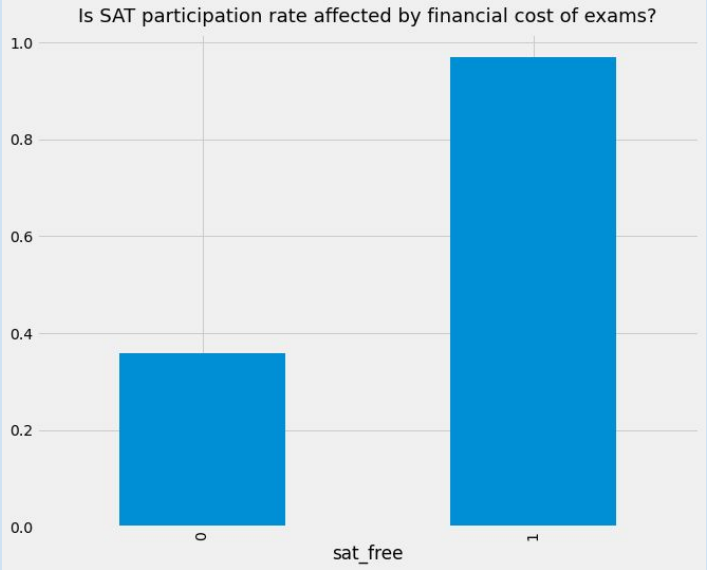
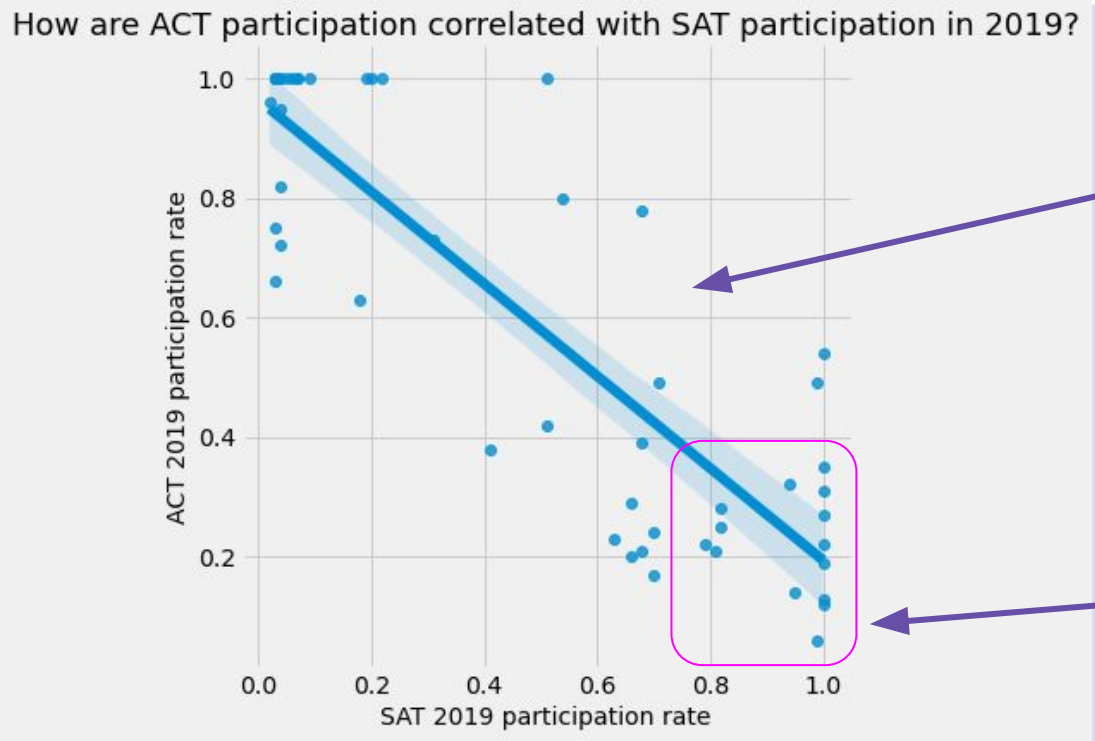
Data import & cleaning
Exploratory Data Analysis
Data Visualisation
Conclusion

INSIGHT 1: Where the exams are free for students, participation rates are high!





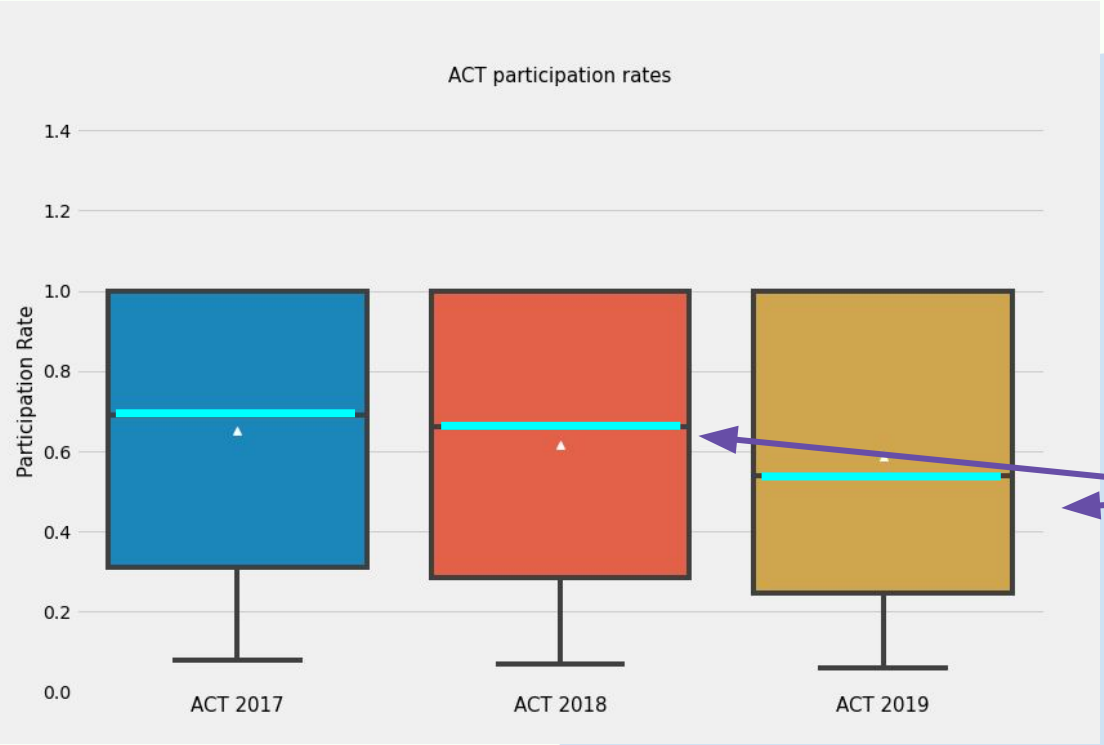
INSIGHT 2: Where SAT is prevalent choice, ACT participation rates are very low!



- Downward trend = Negative correlation

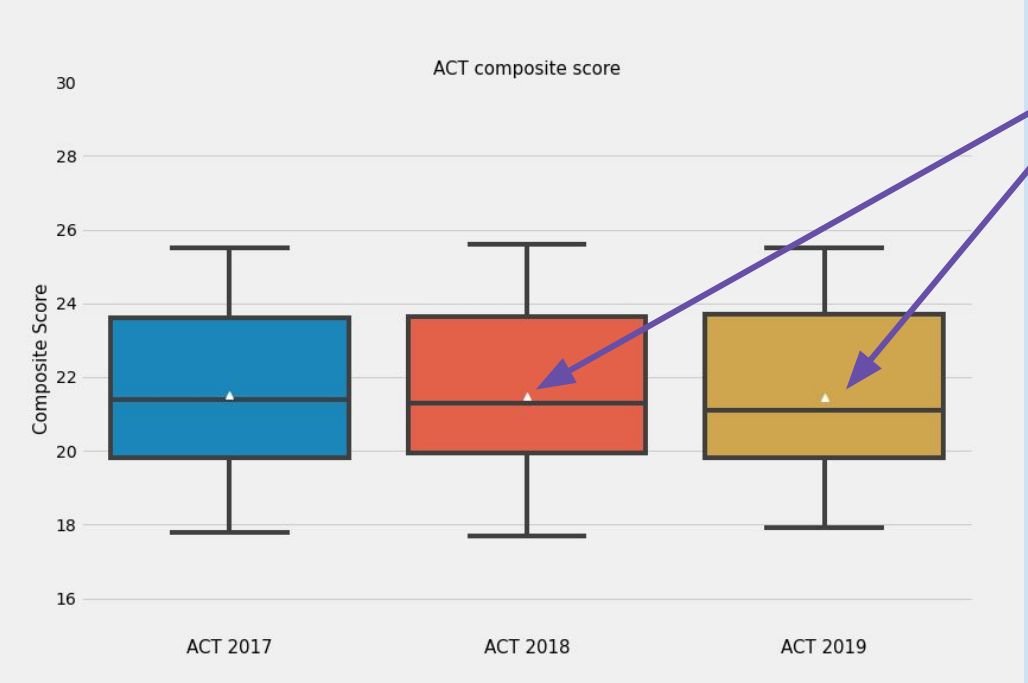
- More data spread here
- States with 80%–100% SAT participation tend to report mainly below 40% ACT participation

INSIGHT 3: Where the ACT is not mandatory and/or not free, participation rates keep dropping!



- The median and mean ACT participation drop from 2017 to 2018
- Steep drop in 2019!

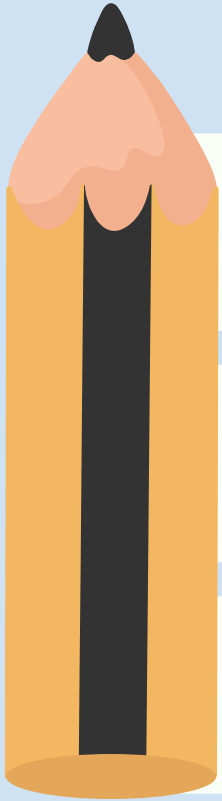
INSIGHT 4: In general, composite scores drop slightly from year to year!



Mean composite scores:

- 21.51 (year 2017)
- 21.49 (year 2018)
- 21.46 (year 2019)

Recommendations



Maintain contracts with states/school systems that administer ACT for free

- **Increase market share to other states**

Add focus on marketing ACT in states where SAT is prevalent choice

- **Angle it towards high-achieving students**

Update test conditions to make it more equitable

- **Helps boost performance of low-achieving students who form bulk of underserved student population**