

The background is a deep blue gradient with a starry space texture. On the left side, there are several overlapping circular elements. One large circle has a scale from 140 to 260 in increments of 10, with tick marks. Other circles are partially visible, some with dashed lines and arrows, suggesting a technical or scientific theme.

ANALYSIS REPORT

(STUDENT PERFORMANCE DATA)

– DIVYANSH DUBEY

PROJECT DESCRIPTION

➤ Context

- Marks secured by the students

➤ Content

- This data set consists of the marks secured by the students in various subjects.

➤ Acknowledgements

- http://roycekimmons.com/tools/generated_data/exams

➤ Inspiration

- To understand the influence of the parents background, test preparation etc. on students performance

DESIGN

□ Tools used for analysis, visualisation and reporting:

- **Ms excel**
 - I used google-spreadsheets for analysing data as it is easy to use and a handy tool for data analysis.
- **Tableau**
 - Tableau is one of the most popular visualisation tools across the world because of its easy to use and handy interface to work on.
- **Ms PowerPoint**
 - I used MS PowerPoint for reporting because of its extensive features list which we can use to present reports. It is really easy to use.

DESIGN

□ Steps:

- Read and worked on understanding the data.
- Consolidate the relevant data.
- Data cleaning
 - Removed duplicates
 - Removed blank cells
 - Removed/replaced inconsistent data
- Used the VLOOKUP function to find and organise this information on a separate sheet.

DESIGN

□ Steps:

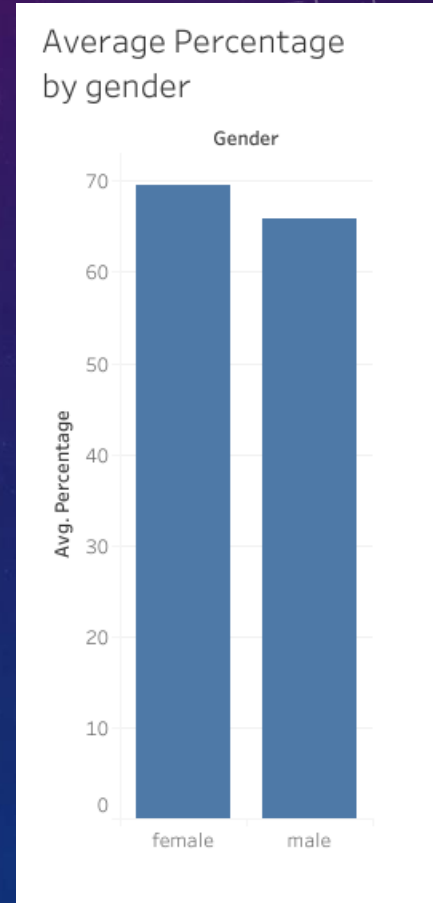
- Data visualisation

Created the following Pivot Tables and Charts using excel and tableau:

- Average Percentage by gender (Bar Chart)
- Effect of parental education on the performance of the kids (Bar Chart)
- Effect of lunch type on the performance of the kids (Bar Chart)
- Effect of test preparation on the performance of the kids (Bar Chart)
- Average Percentage among different ethnicities (Bar Chart)

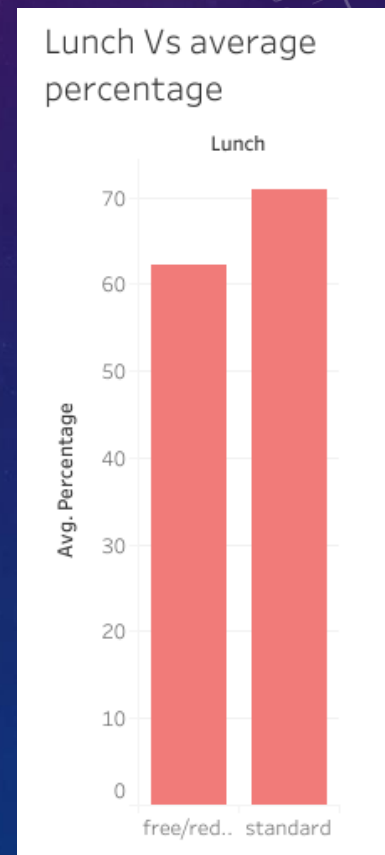
FINDINGS AND INSIGHTS

- Female Students performed relatively better than Male Students.



FINDINGS AND INSIGHTS

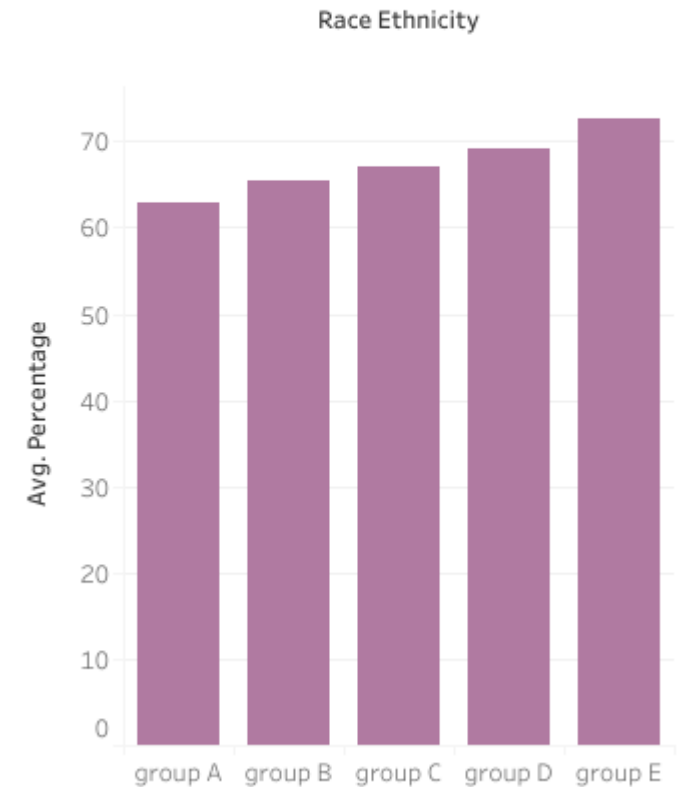
- Students having standard lunch had performed relatively better than students with free/reduced price lunch.



FINDINGS AND INSIGHTS

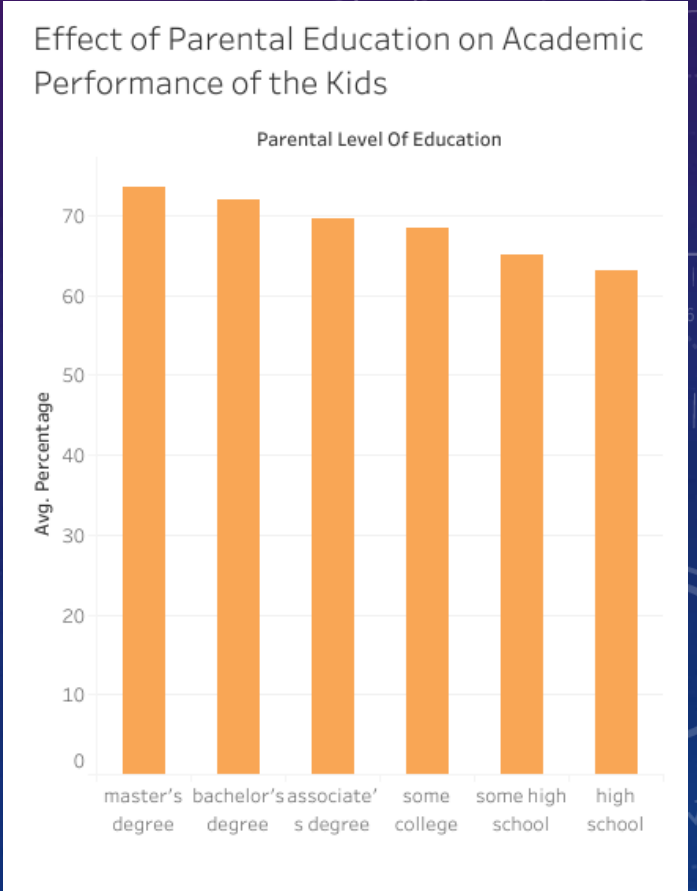
- Students from different Ethnicity Groups performed differently.
 - Students from Group E performed better than students from other groups.
 - Students from Group A performed worse than students from other groups.
 - Performances of the students Group E was best, followed by Group D, C, B and then A.

Average Percentage among different ethnicities



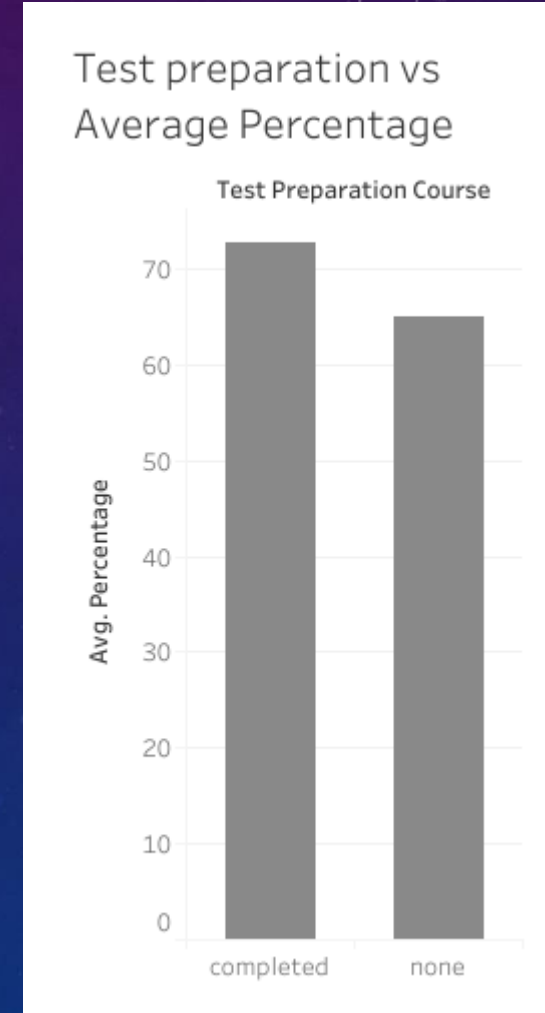
FINDINGS AND INSIGHTS

- Education Level of the parent plays a significant role in the performance of the child as we can see in the graph on right.
- As you can see in the graph, Kids of parents having Master's degree performed best among all, followed by parents with bachelor's degree, parents with associate's degree, etc.



FINDINGS AND INSIGHTS

- Students who completed their test preparation performed significantly better than the students who didn't.



ANALYSIS: REASONS/CAUSES BEHIND INSIGHTS

- Female students have performed well in the exams as schools and government have employed female friendly policies, which aided significantly to their hard-work.
- Food and Nutrients plays a significant part in the growth of the child, which also involves academic learning and thus what a child eats also plays an important part in its learning, which can be seen in the lunch v/s average percentage chart.
- As seen in the Race/Ethnicity v/s average percentage graph, the ethnicity child belonged to also have a significant influence on its performance, which may be due to various factors like economic conditions of the communities, social backwardness of the community, etc.

ANALYSIS: REASONS/CAUSES BEHIND INSIGHTS

- As we can see in the parental education v/s average percentage graph, parental education plays a huge part in child's education. Being educated helps/support as well as influence child's learning.
- Last graph i.e., Test Preparation v/s average percentage, shows that being prepared for test significantly improved the performance of the student in the exams.

CONCLUSION: MY PROPOSALS FOR SOLUTIONS

- As with only little upliftment, females are already doing well than males. Government and institutions should keep running more and more encouraging policies for women.
- Special care should be given to child's nutrition. Every child's nutrition should be a priority, so that every child should get all the nutrients it needs through nutritious diet.
- Upliftment of the backward races should be the top priority for the government and the institutions to encourage them towards learning.
- Parents should also educate themselves as it will significantly effect the performance of the child in positive way.
- Extra focus should be given on kids to revise and review what they have been taught before.