



STUDENTS PERFORMANCE FACTORS ANALYSIS

By

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To analyse how the scores are impacted based on different factors like gender, race, test preparation, e.t.c.



Project Goal:

- To identify Factors that has effects on Students Academic Performance.
- This will help us to:
 1. Know the reason for a poor performance of students.
 2. Make students understand the factors that help in an excellent performance.



Data Source

<https://www.kaggle.com/datasets/spscientist/students-performance-in-exams>



Key Questions

- ❑ How does Parental Level of Education affects Students Performances?
- ❑ Which Race/Ethnicity has the highest Percentage of Students Performance?
- ❑ Effectiveness of Test preparation Course
- ❑ Which major factor contribute to the students performance?

Findings And Insights





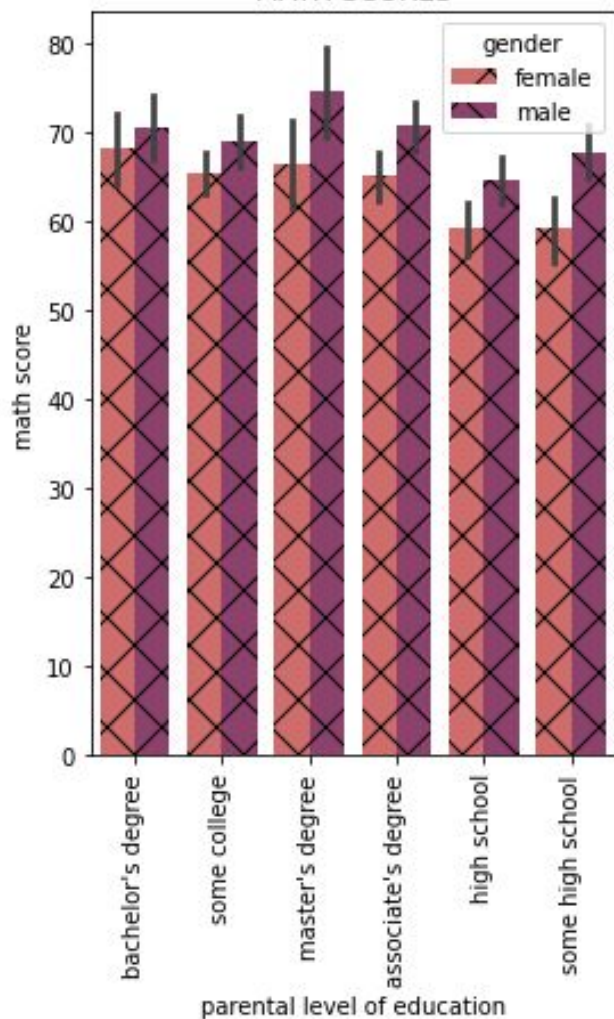
1. How does Parental Level of Education affects Students Performances?

Looking at the visualization below:

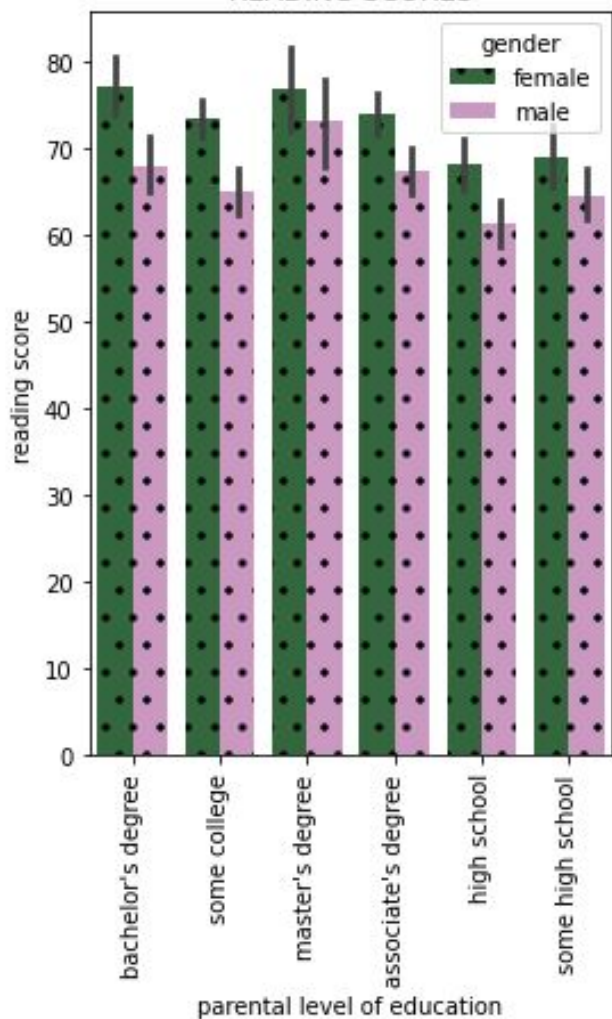
- The highest scores of the student has a “Masters Degree” parental level of education
- The lowest scores of the student has a “high school” parental level of education
- Male gender scored higher than the Female gender in Math course
- The Female had a higher scores in reading and writing

Therefore , Parental level of Education affects Students performance in the sense that the higher the level of education of the parent the higher the student performance.

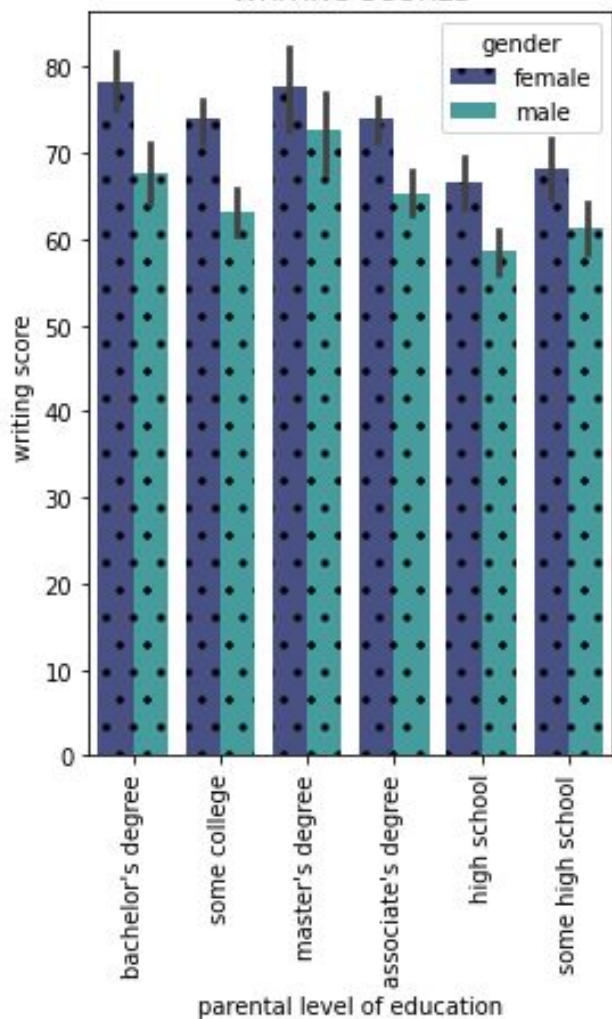
MATH SCORES



READING SCORES



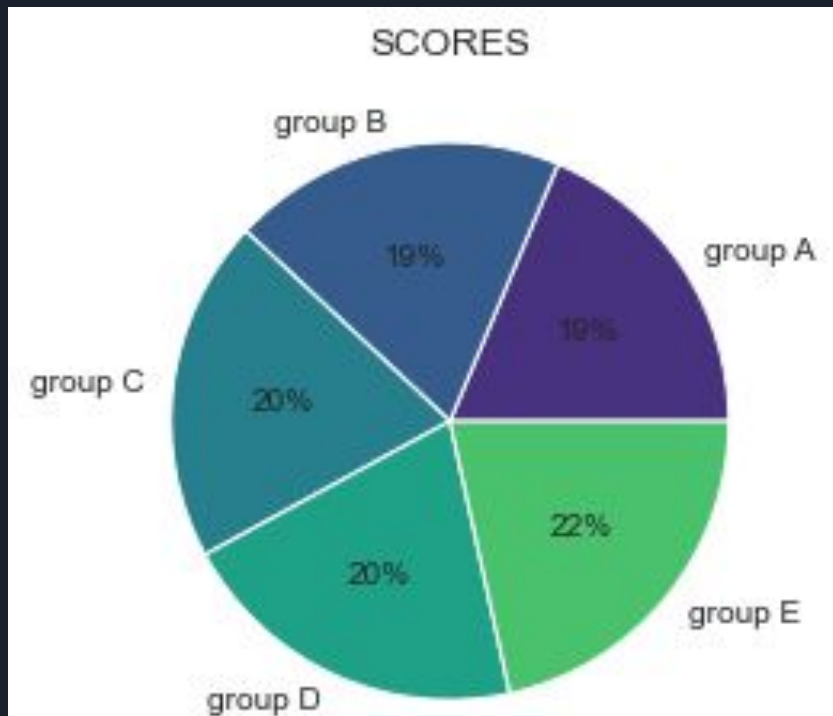
WRITING SCORES



2. Which Race/Ethnicity has the highest Percentage of Students Performance?

Points noted:

- ❖ Group E race/ethnicity has the highest percentage of students performance.
- ❖ The group C and group D race/ethnicity has equivalent percentage of the performance of students.
- ❖ The group A and group B race/ethnicity has equivalent percentage of the performance of students.





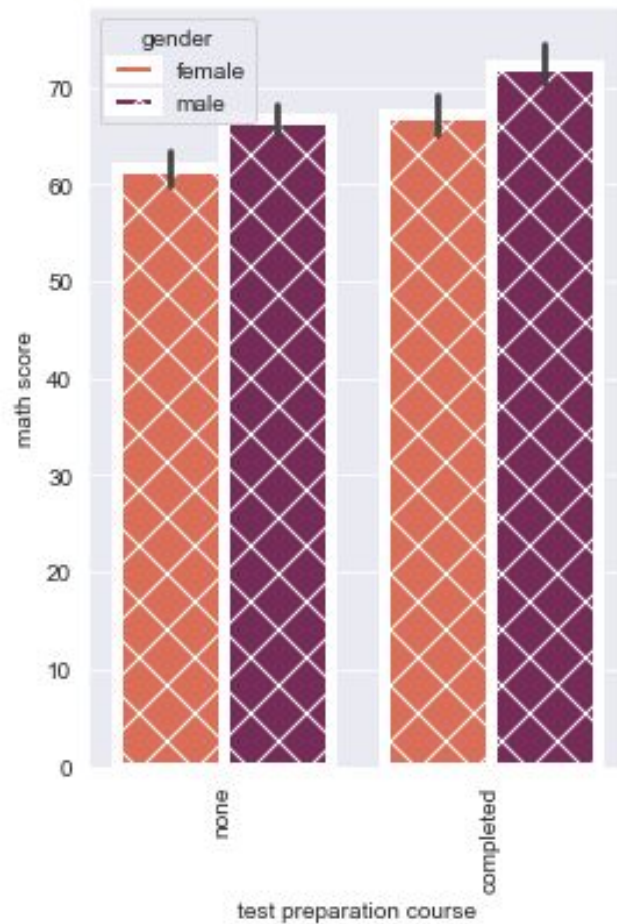
3. Effectiveness of Test preparation Course

Insights from the visualization below:

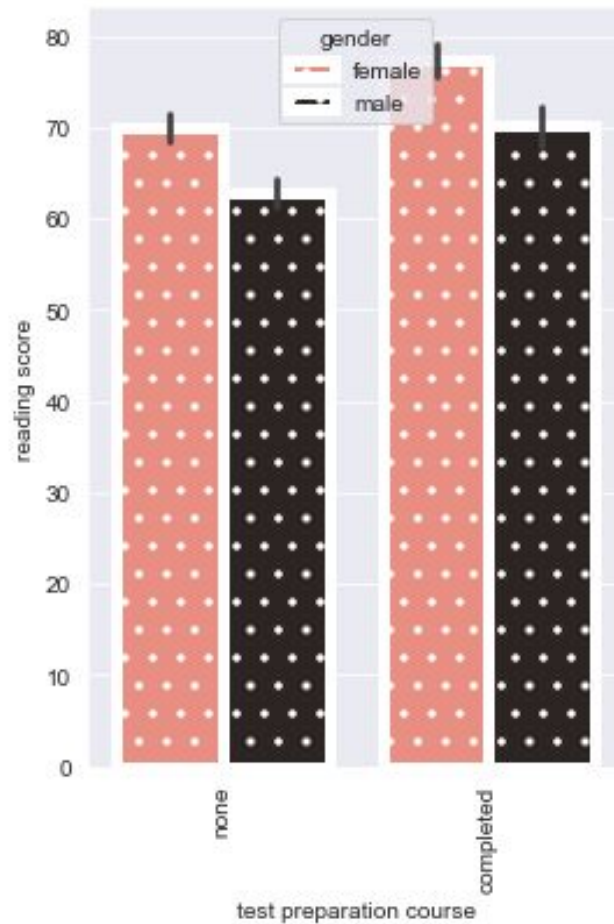
- ★ We can see in the 1st plot that Students who completed the test preparation course had higher scores than students who did not.
- ★ And also, in the 1st plot we can see that Male students had a higher Math score than the the Females.
- ★ We also can draw an insight that Female tend to have a higher scores than Males in Reading and Writing courses

Therefore, we can conclude that test preparation course is very important and effective for students to have a high academic performance.

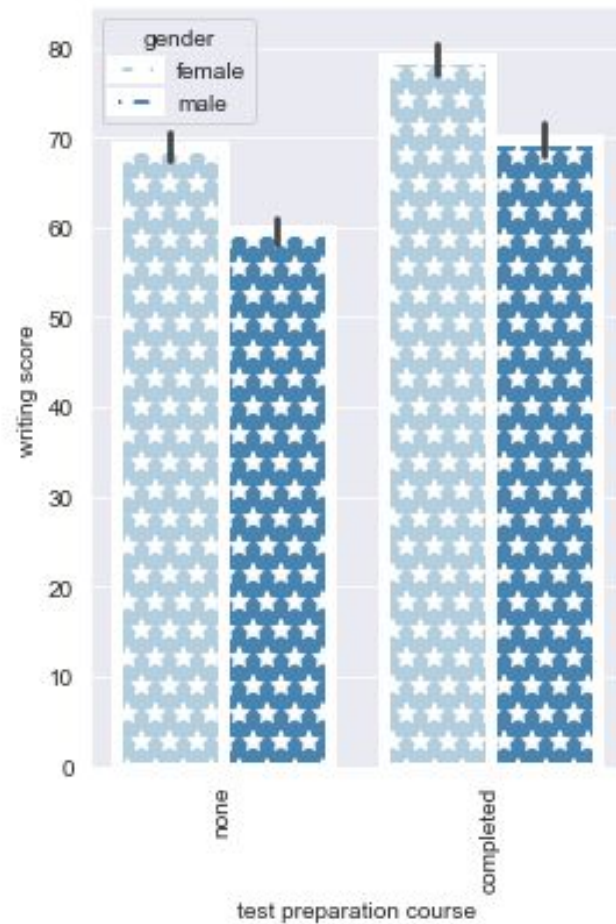
MATH SCORES



READING SCORES



WRITING SCORES





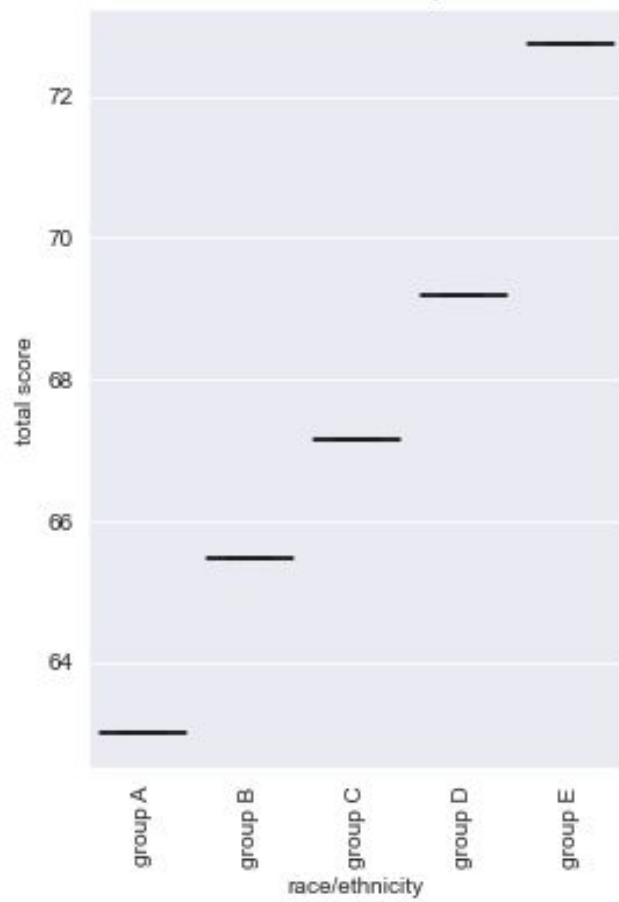
4. Which major factor contribute to the students performance?

Insights from the visualization below:

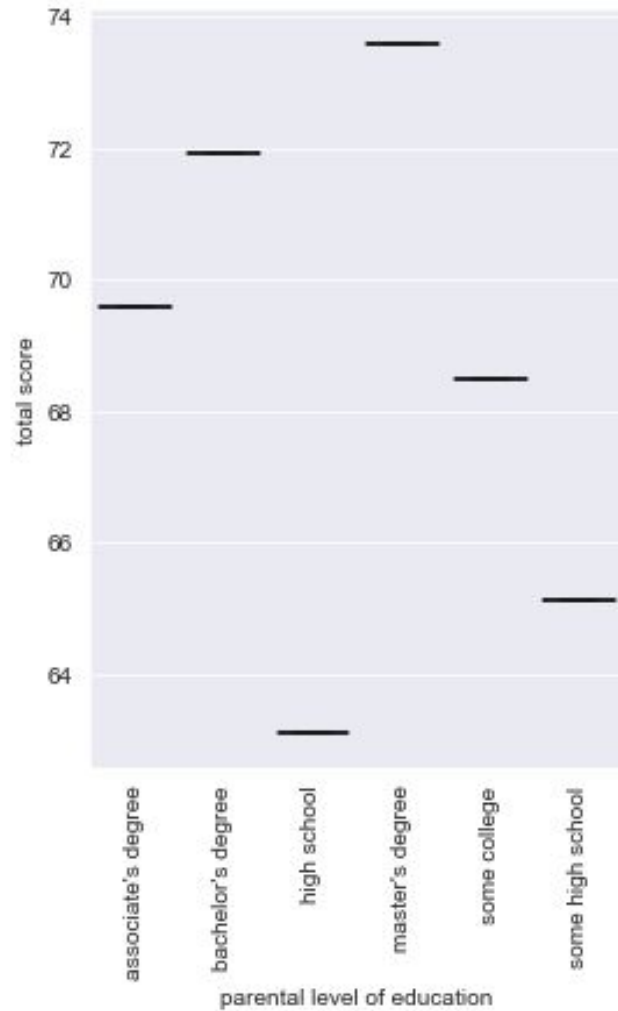
- ❖ Parental level of education has the highest contributing factor to the performance of students.
- ❖ Race/Ethnicity has the lowest contributing factor to the performance of students.

With that said, Students whose parents has a high level of education tends to have a good academic performance in conjunction to the students personal effort in preparing for the course.

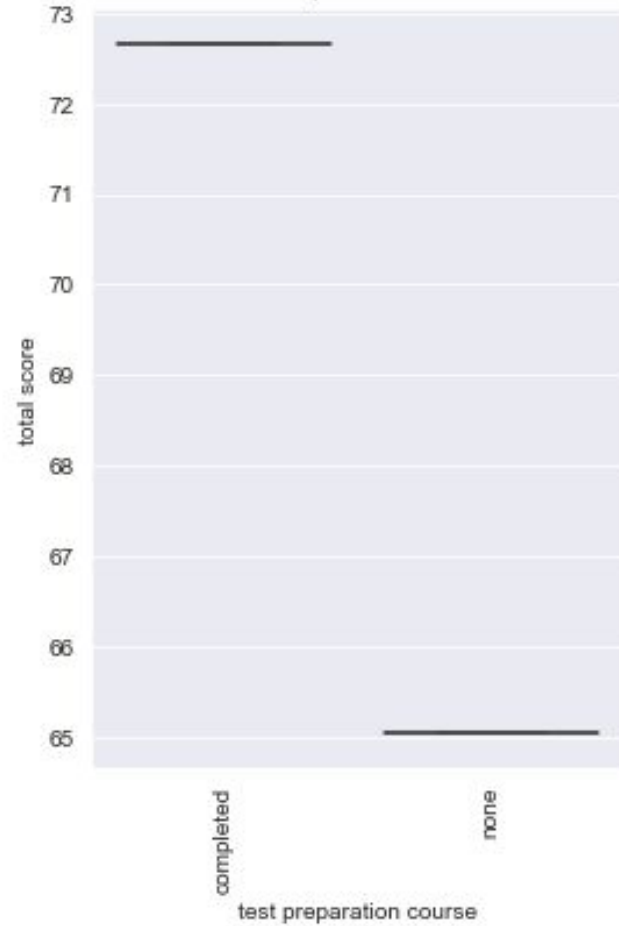
Race/Ethnicity



Parental Level of Education



Test Preparation course



Summary



Summary of findings:

- Parental level of Education has effects on Students performance
- Female gender tends to perform well in reading and writing courses than than that of Male gender.
- Male gender performs well in Math courses than in reading and writing courses.
- Test preparation course has effect on students performance. (Students who tend to prepare for a course has a better performance than students who don't).
- The major factor that contribute to the good performance of Students is the Parents level of Education followed by the Students efforts in preparing for the course.



THANK YOU