



Title: Student Performance Factors

Team Members:

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Source Code:

<https://www.kaggle.com/datasets/lainguyn123/studentperformance-factors>

Cleaning:

We removed null values using python from the rows of the data because it served no purpose for our analysis

Objective:

- *Hours studied vs Exam Scores over time*

Whats the relationship between the number of hours studied and the corresponding exam scores over different time periods?

- *Attendance vs. Exam Score*

How does attendance frequency directly impact student exam performance?

- *Parental and Environmental Influence*

How do parental involvement and environmental factors influence student exam performance?

- *School Type with Education by Gender*

How do school type, gender, and parental education affect student outcomes? What factors contribute to the differences we see?

- *Cumulative Exam Score by Hours Studied*

How does total study time affect exam scores?

- *Genders and exam scores.*

What's the relationship between gender and exams scores ?

Insights:

- **Strong Positive Correlation:** There's a strong positive relationship between attendance frequency and exam scores.
- **Parental Involvement:** Higher parental involvement correlates with higher exam scores.
- **Motivation:** Students with high motivation consistently outperform those with low motivation.
- **Interaction:** The combination of high parental involvement and high motivation appears to have the most significant positive impact on exam scores
- **School Type:** Students from private schools tend to study more hours than those from public schools, especially among students with postgraduate parents.
- **Gender:** Female students consistently study more hours than male students across all parental education levels and school types.
- **Interaction:** The combination of school type and parental education level might influence study hours.
- **Positive Correlation:** There is a positive correlation between hours studied and exam scores for both male and female students.
- **Gender Differences:** While the overall trend is similar, female students initially outperform male students at lower levels of study hours, but the upward trend for females seems to plateau earlier. At very high levels of study hours, male students may outperform female students