Reign Alger Ofamen
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BSCS 4B

10/12/2025

Data Analysis Summary Report

Based on Student Performance Dataset (Reign-CJ.xlsx)

Objectives:

The objective of this analysis was to examine relationships between student performance factors such as study hours, attendance, and exam scores. The goal is to identify key predictors of academic success and derive actionable insights for improving performance outcomes.

Key Findings:

1. The average exam score across all students is approximately 90, with a maximum of 100 and a minimum of 71.
2. Students who study more than 8 hours and maintain at least 85% attendance consistently achieve higher scores.
3. Study hours show a stronger correlation with exam results than attendance, indicating that consistent study habitshave a significant impact on performance.
4. Conditional formatting highlights a clear trend where lower study time aligns with lower exam performance.

Predictions (from Regression Analysis):

Using regression modeling, the predicted equation suggests a positive linear relationship:

Exam_Score = 45.21 + 3.87*(Study_Hours) + 0.22*(Attendance)

The R^2 value of 0.86 indicates a strong predictive accuracy, meaning 86% of the exam score variance can be explained by study hours and attendance combined.

Business Recommendations:

- Encourage students to allocate at least 8–10 study hours per week to maximize exam performance.
- Implement attendance monitoring and incentive programs to maintain at least 85% participation.
- Develop personalized learning plans focusing on students with low study engagement.
- Continuously track study hours and attendance metrics to predict and prevent academic underperformance.

Conclusion:

The analysis demonstrates that both attendance and study hours are strong indicators of student success, with study effort being the most influential factor. The dashboard created in Excel provides a visual tool for monitoring progress and identifying at-risk students early.

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