Data Visualization Portfolio - Student Habits & Performance

Title Slide

Student Habits & Academic Performance

Data Visualization Project - Internship Task 3

MERUKUMAR A.U - Data Analytics Role -

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Project Objective

Goal: Explore how students' lifestyle habits (study hours, sleep, diet, etc.) impact academic performance using data visualization techniques.

Dataset Overview

- 1000+ records of students
- Features: Study habits, social media, diet, mental health, exam scores
- Target Variable: exam_score

Tools Used

- Python: Data processing & analysis
- Seaborn & Matplotlib: Visualizations
- Pandas: Data manipulation

Distribution of Key Metrics

- Histogram: study_hours_per_day
- Histogram: exam_score

Insight: Most students study 1-4 hours/day. Exam scores are skewed.

Correlation Insights

- Heatmap of numeric variables

Insight: Study hours strongly correlate with exam score. Sleep has moderate effect.

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Key Relationships

- Scatter plot: Study Hours vs Exam Score

Insight: More study hours generally lead to higher scores, regardless of gender.

Categorical Comparisons

- Boxplot: Exam Score by Part-Time Job

- Barplot: Exam Score by Diet Quality

Insight: No part-time job and good diet show better scores.

Lifestyle Balance

- Pairplot: Sleep, Exercise, Study vs Exam Score

Insight: Balance of sleep, study, and exercise leads to better performance.

Conclusion

- Time management and healthy habits improve academic results

- Visuals reveal hidden patterns

- Helps educators & students make informed decisions.

Next Steps

- Make interactive dashboard (e.g.,
Tableau,PowerBi)

- Extend to predictive modeling

- Publish to LinkedIn, GitHub, or personal website.

T**hank You**

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