

Student Performance Analyzer (Python Project)

Dataset:

This project uses the “Students Performance” dataset from Kaggle, which contains exam scores in math, reading, and writing along with demographic attributes such as gender, lunch type, and test preparation status.

Objectives:

The goal of this project is to build a menu-driven Python application that loads student performance data, computes descriptive statistics, compares performance across groups, and visualizes score distributions.

Features:

- Dataset loading and column cleaning
- Basic dataset exploration
- Overall score statistics (mean, min, max)
- Group-based score comparisons
- Histogram visualization of score distributions

Tools & Technologies:

- Python
- pandas
- matplotlib
- Git & GitHub

Team Contributions:

- Part 1: Data loading and basic statistics
- Part 2: Score statistics and test preparation analysis
- Part 3: Group comparisons
- Part 4: Data visualization and documentation

Conclusion:

The application demonstrates how Python can be used for exploratory data analysis and basic visualization in an educational dataset.