# 📝 Project Summary: Student Scores Analysis

This project explores a dataset of **30,641 students** to understand how **demographic and socio-economic factors** influence performance in **Math, Reading, and Writing**. The analysis was performed using **Python (Pandas, Matplotlib, Seaborn)**.

## 🔹 Key Steps:

- **Data Cleaning**: Handled missing values (~10% in some columns), dropped unnecessary index column.
- **Exploratory Data Analysis (EDA)**: Performed univariate and bivariate analysis with visualizations.

## 📊 Key Insights:

- **Gender**: Slightly more females (~50.3%) than males (~49.7%).
- **Parental Education**: Students with parents holding a **Master's degree** had the highest average scores in all subjects.
- **Marital Status**: Had **negligible impact** on student performance.
- **Ethnic Group**: Most students were from **Group C (32%)** and **Group D (26.1%)**.
- **Scores Overview**:
    - **Math**: Avg = 66.6
    - **Reading**: Avg = 69.4
    - **Writing**: Avg = 68.4

## 📌 Tools Used:

- **Pandas** for data wrangling
- **Seaborn & Matplotlib** for visualizations
- **GroupBy**, **heatmaps**, **boxplots**, **pie and bar charts**