Student Data Management Analysis Project

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Data Analysis Project using Excel & Power BI

Aim & Objectives

The aim of this project is to analyze and manage student-related data effectively using Excel and Power BI. The objective is to provide meaningful insights that help educational institutions track student performance, monitor attendance, and improve overall academic management.

- To organize and clean student data for effective analysis.
- To create interactive dashboards using Excel and Power BI.
- To visualize student performance, attendance, and demographics.
- To generate actionable insights for better decision-making.

Methodology & Tools Used

The project was carried out using the following tools and techniques: - Microsoft Excel was used for data cleaning, organization, and building a preliminary dashboard. - Power BI was utilized to create an interactive and dynamic visualization dashboard. - Basic statistical techniques were applied to summarize the data. - Insights were derived by analyzing patterns and trends in the student dataset.

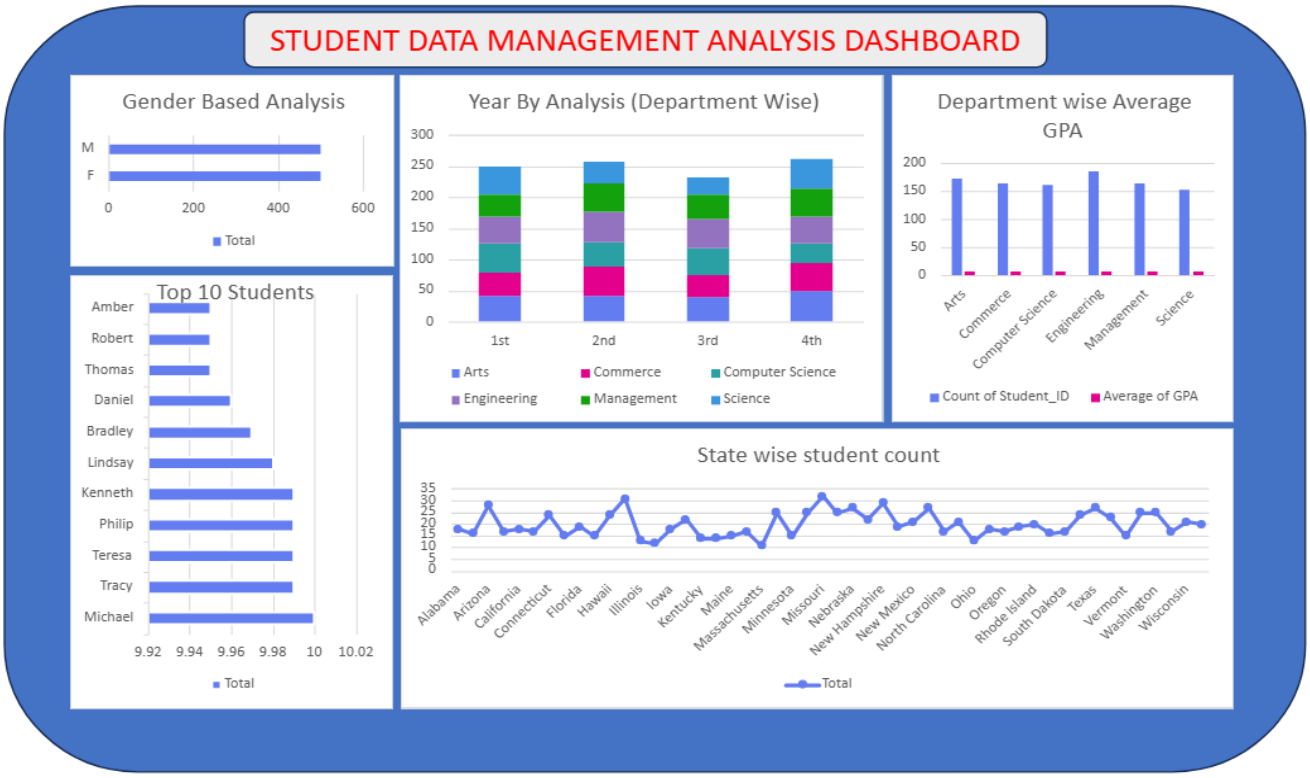
Analysis & Insights

Based on the analysis from both Excel and Power BI dashboards, the following insights were obtained:

• Student attendance trends show variations across different classes and subjects.
• Performance analysis highlights top-performing students and areas needing improvement.
• Demographic breakdown provides better understanding of student distribution.
• Power BI dashboard allows interactive filtering for in-depth analysis.

Dashboard Screenshots

Excel Dashboard



Power BI Dashboard

STUDENT DATA MANAGEMENT DASHBOARD

Students
1000

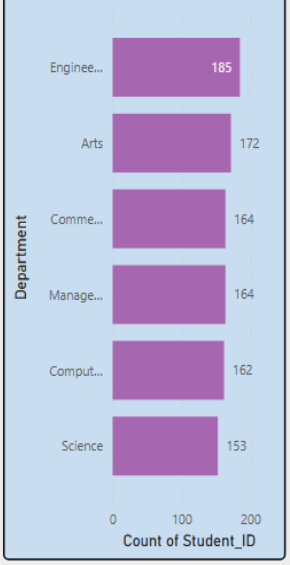
Total Departments
6

Average GPA
0.00 7.98 15.97

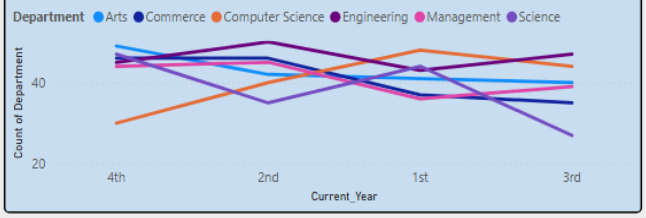
Gender Distribution
F
M

Current_Year
1st 2nd 3rd 4th

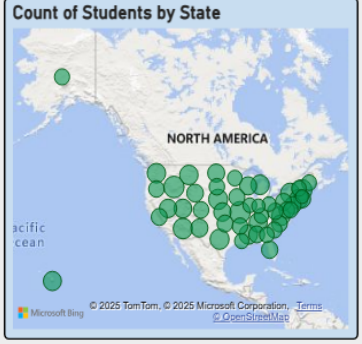
Student Count By Department



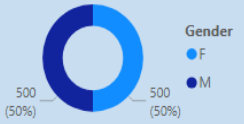
Trend (yearwise) in ech department



Count of Students by State



Count of Students by Gender



Student_ID	First_Name	Department	GPA	Gend
1292	Roger	Computer Science	9.80	M
1689	Tara	Computer Science	9.80	F
1811	Andrew	Engineering	9.81	M
1776	Parker	Engineering	9.82	M
1819	Christina	Computer Science	9.82	F
1871	John	Computer Science	9.82	M
1959	Sarah	Engineering	9.82	F
1256	Paul	Arts	9.83	M
1349	Kelly	Engineering	9.83	F
1873	Tasha	Science	9.83	F
1096	Lynn	Arts	9.84	F
1295	Amanda	Engineering	9.84	F
1582	Cynthia	Computer Science	9.84	F
1124	Frank	Science	9.85	M
1439	Michelle	Management	9.85	F
1209	Kevin	Science	9.86	M
1282	Andrea	Arts	9.86	F
1729	Daniel	Arts	9.86	M
1087	Angela	Management	9.88	F
1354	Tiffany	Computer Science	9.88	F
1030	Sarah	Engineering	9.90	F
Total			10.00	

Conclusion

This project demonstrates how Excel and Power BI can be effectively used for Student Data Management. The analysis provides valuable insights that can support academic planning, monitor student progress, and help institutions make data-driven decisions for improving educational outcomes.