

Academic and Extracurricular Dynamics of University Students in Pakistan: A Comprehensive Analysis

Introduction:

This case study explores the academic and extracurricular profiles of university students across various institutions in Pakistan. The data provides insights into the demographics, academic achievements, and involvement in extracurricular activities of these students.

Data Description:

The dataset comprises 15 columns with detailed information on students, including their unique IDs, names, universities, cities, programs, academic levels, enrollment years, GPAs, statuses, ages, disciplines, funding types, scholarships, hostel accommodations, and participation in extracurricular activities.

StudentID: A unique identifier for each student.

Name: The name of the student.

University: The name of the university where the student is enrolled.

City: The city where the university is located.

Program: The program in which the student is enrolled.

Level: The academic level of the student (e.g., Undergraduate, Graduate, PhD).

Year: The year of enrollment or graduation.

GPA: The Grade Point Average of the student.

Status: The current status of the student (e.g., Graduated, Dropped).

Age: The age of the student.

Discipline: The academic discipline of the student (e.g., Science, Arts).

Funding Type: The type of funding the student receives (e.g., Government, Private, Semi-Government).

Scholarship: Whether the student has a scholarship (Yes or No).

Hostel: Whether the student stays in a hostel (Yes or No).

Extracurricular: Whether the student participates in extracurricular activities (Yes or No).

Objectives:

- Analyze the distribution of students across different universities and cities.
- Examine the academic performance (GPA) of students across various programs and levels.
- Investigate the relationship between funding types and scholarship awards.
- Understand the demographic distribution in terms of age and academic status.
- Explore the involvement of students in extracurricular activities and its correlation with academic performance.

Questions for Visualization using Pivot Tables:

1. What is the distribution of students across different universities?
2. How many students are enrolled in each program and academic level?
3. What is the average GPA of students across different universities?
4. How does the average GPA distribution vary by city?
5. What is the percentage of students who have graduated versus those who have dropped out?
6. How is the age distribution of students across different programs?
7. What is the correlation between scholarship awards and funding types?
8. How many students are staying in hostels versus those who are not?
9. What is the distribution of students participating in extracurricular activities across different universities?
10. How does the participation in extracurricular activities affect the average GPA of students?
11. What is the distribution of students by academic discipline?
12. How many students are receiving scholarships in each academic level?
13. What is the percentage of students with government, semi-government, and private funding?
14. How does the academic status (graduated or dropped) vary by year of enrollment?
15. What is the relationship between city and the type of funding students receive?

Note: Please do analysis on clean Dataset and derive insights using pivot tables.