

Student Migration Project Report

- The Student Migration dataset contains 21 uncleaned columns and 200 rows. This dataset is about students from different countries migrating to different countries for their higher studies.
- Here I have used SQL for showcasing data cleaning, Python for Exploratory Data Analysis(EDA) and PowerBI for Dashboard formation.

Exploratory Data Analysis:

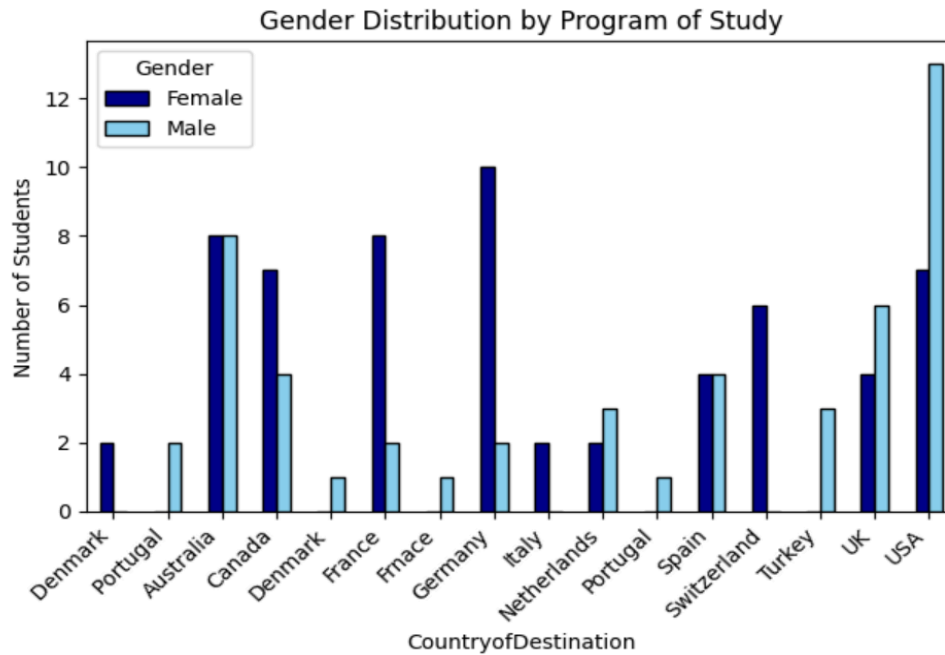
describe() method-

	Age	YearOfMigration	GPA	ApplicationFee	GraduationYear	AdmissionTestScore	Batch
count	113.000000	113.000000	110.000000	113.000000	113.000000	111.000000	0.0
mean	21.982301	2022.106195	3.614602	102.982301	2025.858407	315.858976	NaN
std	1.420402	1.764546	0.496379	28.381012	2.034819	10.237483	NaN
min	19.000000	2020.000000	2.600000	0.000000	2023.000000	299.000000	NaN
25%	21.000000	2020.000000	3.500000	100.000000	2024.000000	310.000000	NaN
50%	22.000000	2022.000000	3.600000	105.000000	2026.000000	317.000000	NaN
75%	23.000000	2024.000000	3.700000	120.000000	2028.000000	321.000000	NaN
max	25.000000	2025.000000	8.200000	150.000000	2029.000000	340.000000	NaN

- The above image shows the count,mean,standard deviation,Inter Quartile Range and max values of numerical columns. So students with minimum age who migrate is 19 and maximum age is 25. Similarly Minimum GPA needed to enroll in foreign colleges is 2.6 and maximum 4. Also Minimum Test Score needed is 299 and Maximum is 340.

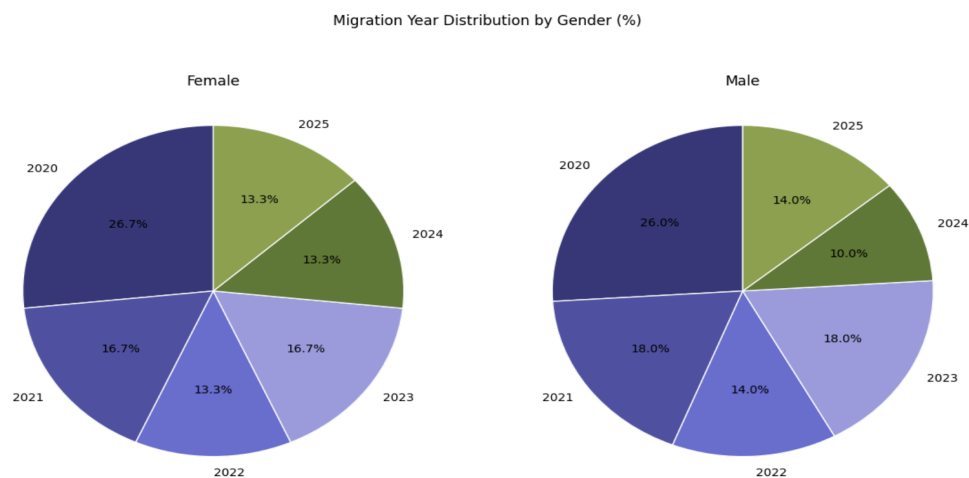
Gender Distribution by Program of Study

- To understand the distribution of both genders based on Program Of Study here a bar chart is used since both are categorial values
- Both male and female are pursuing Engineering more and fields like architecture,art,biology ,business admin, psychology,music are pursued more by female and philosophy,history,law by male



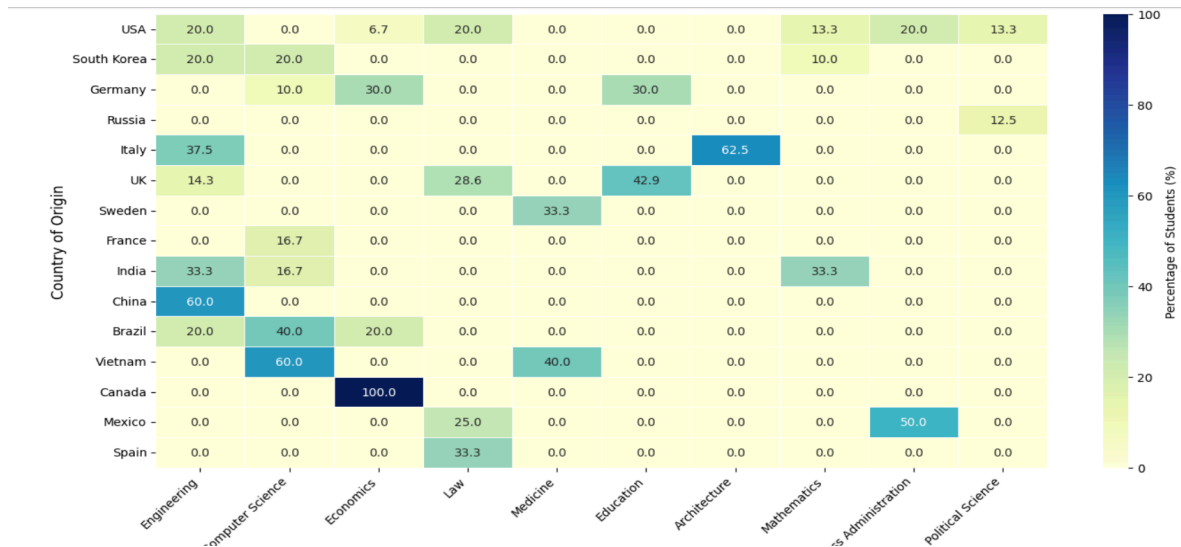
Gender Distribution Based on Migration year

- To understand this a pie chart is made along with different pie charts for each gender. Since the dataset contains the details of last 5 years (2020-2025) the charts are according to that.
- The charts shows that the highest Migration of both Female and Male is done in the year 2020 which is 26.7 % and 26 % respectively. It is also noted that the migration rate has gradually decreased after 2021 from 16% to 13% in 2025 in case of both genders.



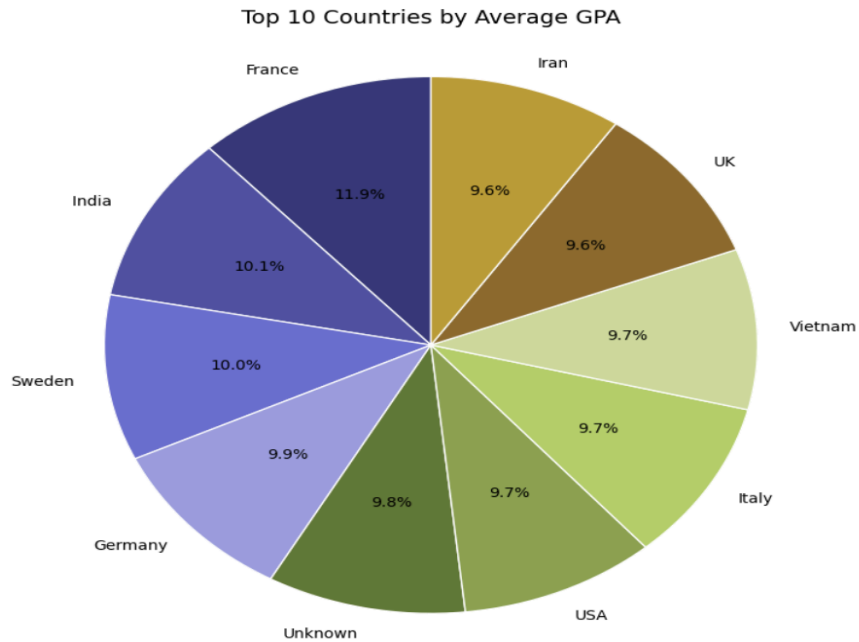
Most Popular Programs Based on Country of Origin

- To understand this a heat map is used which shows percentage of students studying different programs in different countries. Higher percentage is denoted by Dark Blue and lower percentage is denoted by yellow in the Heat Map.
- In China there are most number of Engineering students which is 60% followed by Italy with 37.5% and India with 20%.
- Similarly for different countries percentages are noted in the Heat Map based on Popularity of Programs.



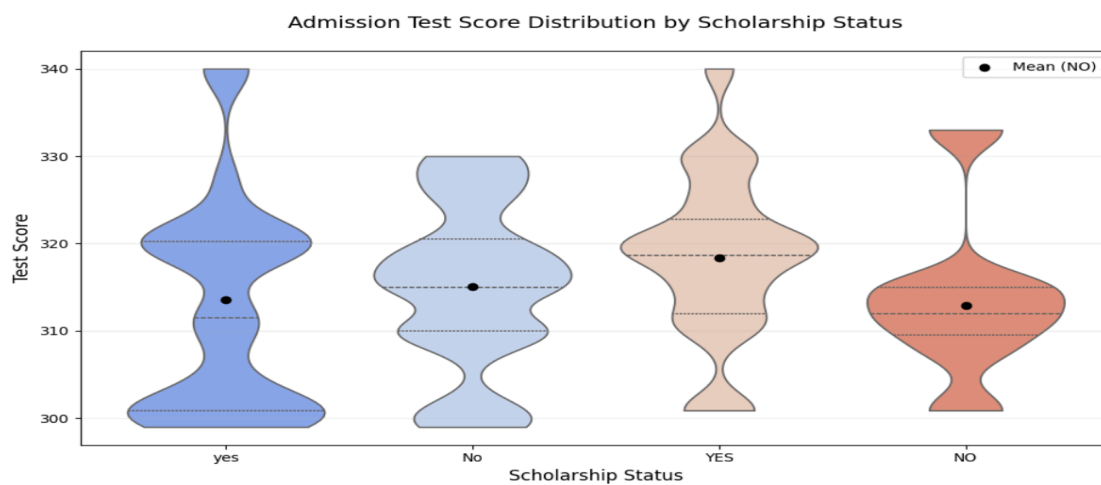
Highest Average GPA of Students per Country:

- To understand this a pie chart is used. Here only top 10 countries is shown in the chart.
- Through the pie chart it is noted that France has the Highest average GPA which is 11.9% and Iran has the lowest which is 9.6% GPA.
- There are many other countries as well but here only the top 10 is chosen.



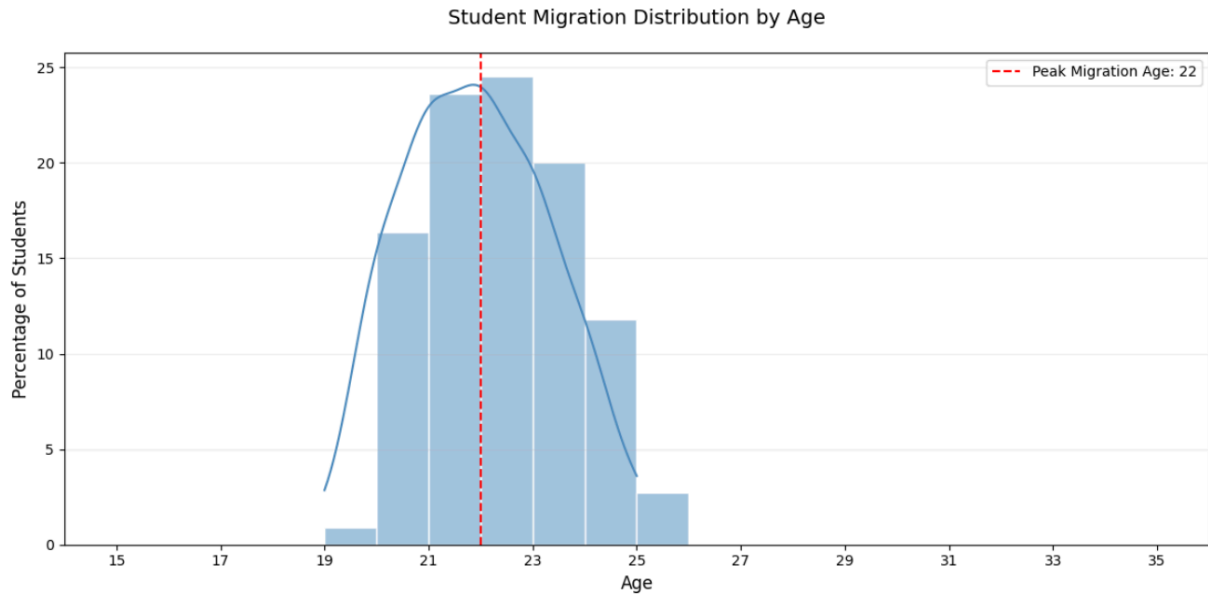
Admission Test Score Distribution By Scholarship Status

- To show this a violin plot is used. Here the distribution shows if higher or lower admission test scores has any relationship with a student's Scholarship status.
- From the plot it can be seen that students with YES scholarship status has higher admission score compared to students with NO scholarship status.



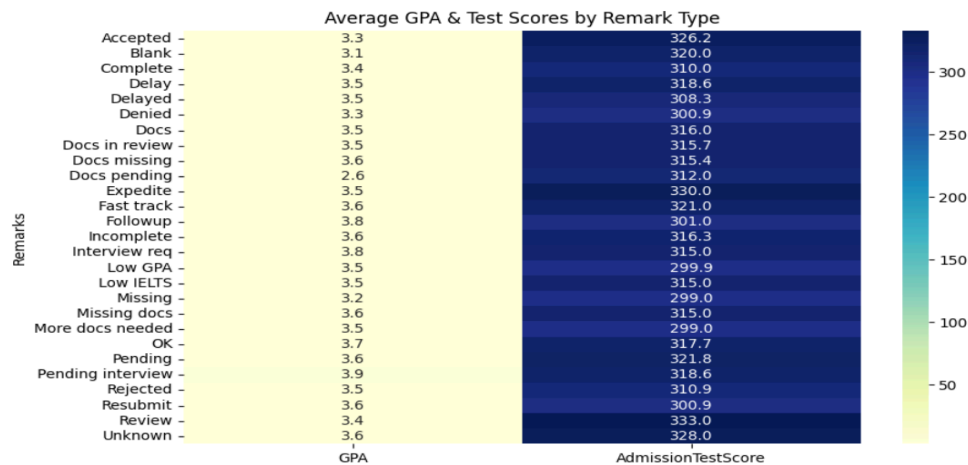
Student Migration Distribution by Age:

- A histogram is used to show the distribution of Migration based on Age.
- Here the peak Age For Migration is 22 and the range is from 19 to 25.
- Thus it can be noted that most students migrate to other countries at the age of 22.



Average GPA & Test Scores based on Remark Type:

- Here a Heat Map is used to showcase Average GPA & Test Scores based on Remark Type. Here Remark type is distinct for each individual in the data set.
- Remarks can be based on GPA, Application status and many other factors. And it differs based for every individual based on all this factors.
- This shows That remarks is not related to any of the two and pivot table is made here for quickly, summarizing and aggregating data so it becomes easily understandable.



Analysis Summary:

- Through the above analysis it can be concluded that average 40% of students migrate to other countries for higher studies.
- There are many factors which affect this such as GPA, Popularity of program in certain countries which are not that much available in their native countries etc.