Project on

EDA – Analysis of AMCAT Data

Employment about the expectations & realities among engineer employees:

the AMEO employment outcome report case study.

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❖ Agenda

- Business Problem.
- Goals and objectives of the Project.
- Description of the data.
- Data Preparations.
- Univariate analyses.
- Bivariate analysis.

❖ Business Problem.

➢ Problem Statement.

- ✓ “India increases the population of engineering students by 1.5 million every academic year. What are their chances of getting jobs and paid after graduating from university?”
- ✓ Evaluate the extent of barriers to employment and wage differentials of holders of engineering degrees, and how these variations affected wages and job content supported by data sourced from Connections: Case studies in the Occupational Outlook Handbook published by The Times of India.

❖ Objective of the Project.

- ✓ Assume that it is your main purpose to be mathematically sound when performing EDA for AMEO data.
- ✓ Seek to validate the magazine The Times of India regarding its claims on salaries and occupations for those who graduated as engineers.
- ✓ Explore as well those who get to work and how much they earn.

❖ Critical Aspects of the Collection of Share Information on Data Slide

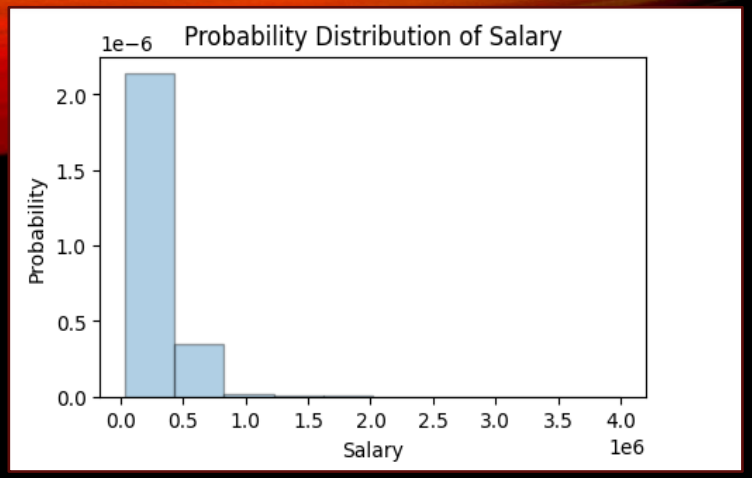
- ✓ Dataset: Aspiring Mind Employment Outcome 2015 (AMEO)
- ✓ Target population: Engineer Graduates
- ✓ For the outcome: Salary, Status, Location
- ✓ For the explanatory: cognitive skill, technical skill, personality skill, age

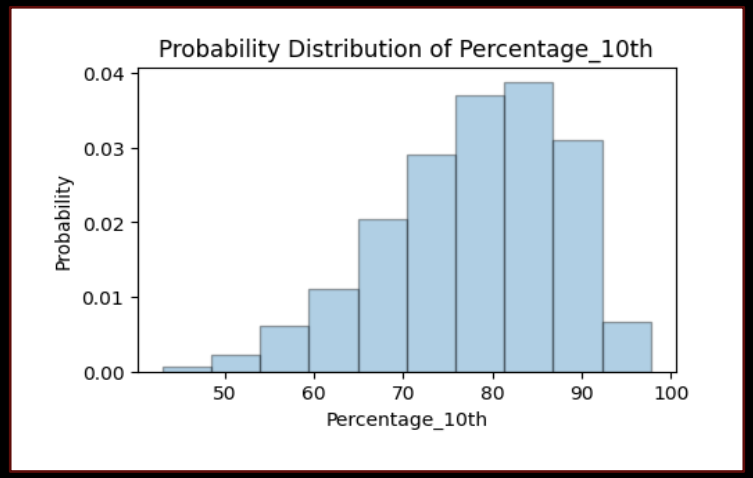
❖ Data Cleaning

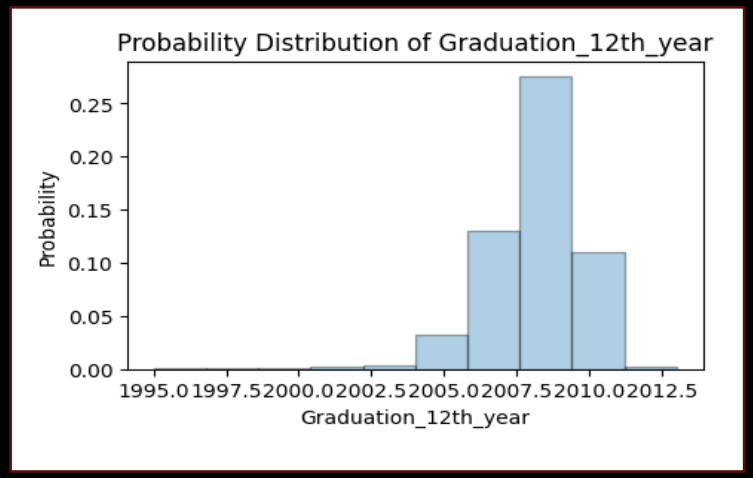
- ✓ Superfluous columns were deleted.
- ✓ Attributes were converted into more useful attributes.
- ✓ Incorrect data types were substituted with correct data types.
- ✓ Obvious errors in typing were rectified (the use of city names in the Job city attribute).
- ✓ Looks variations for Board types and specializations were standardized.

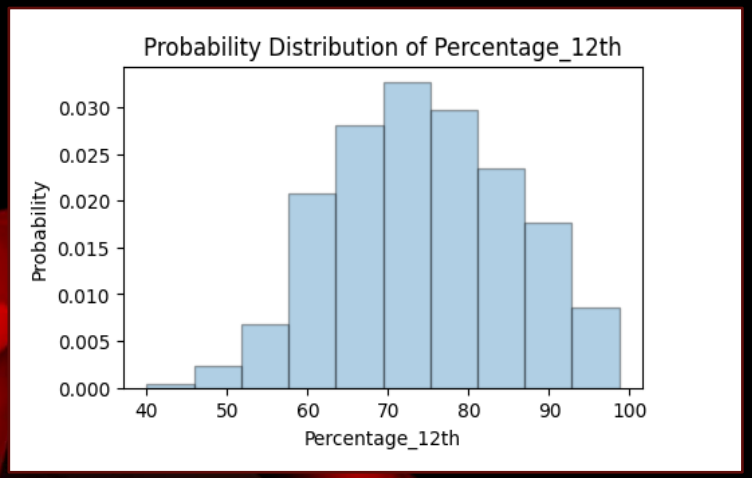
❖ 1.Univariate Analysis

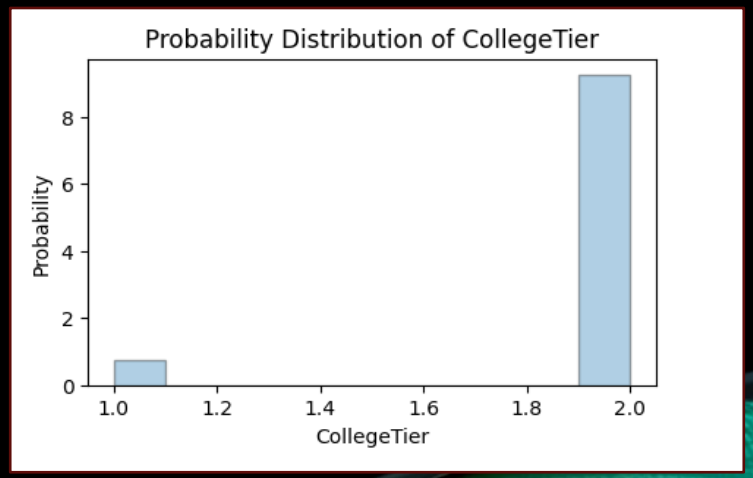
- ✓ Salary: Overall, the largest proportion of this group earns less than ₹1,000,000.
- ✓ 10th Standard: The majority of the scores scored by the individuals fall within the range of 75%-85%.
- ✓ 12th Standard: The majority of the scores scored between 70%-75%.
- ✓ AMCAT Scores: Most individuals scored English, Logical, and Quant parts in the range of 500-600.
- ✓ Engineering Subjects: All mean-scored subjects of Computer Science, Mechanical and Electrical Engineering have low mean scores as it is most underrated.
- ✓ Personality Scores: Most of the people's average personality scores lie between -1 and 1.

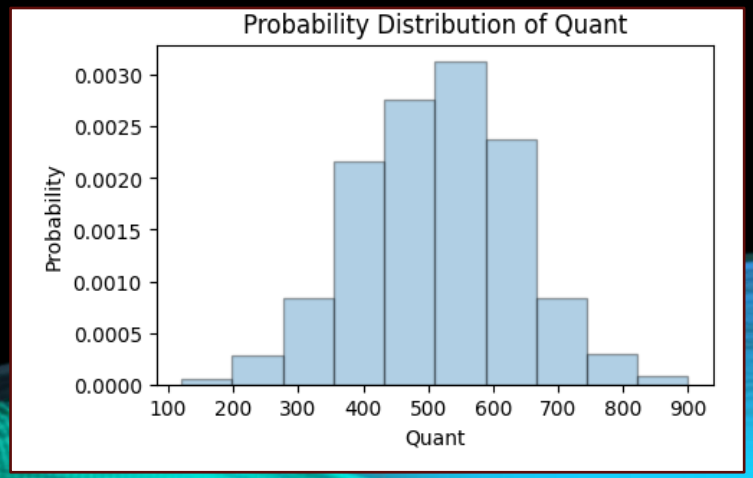

Probability Distribution of Salary
1e−6
Probability
Salary
1e6


Probability Distribution of Percentage_10th
Probability
Percentage_10th


Probability Distribution of Graduation_12th_year
Probability
Graduation_12th_year


Probability Distribution of Percentage_12th
Probability
Percentage_12th

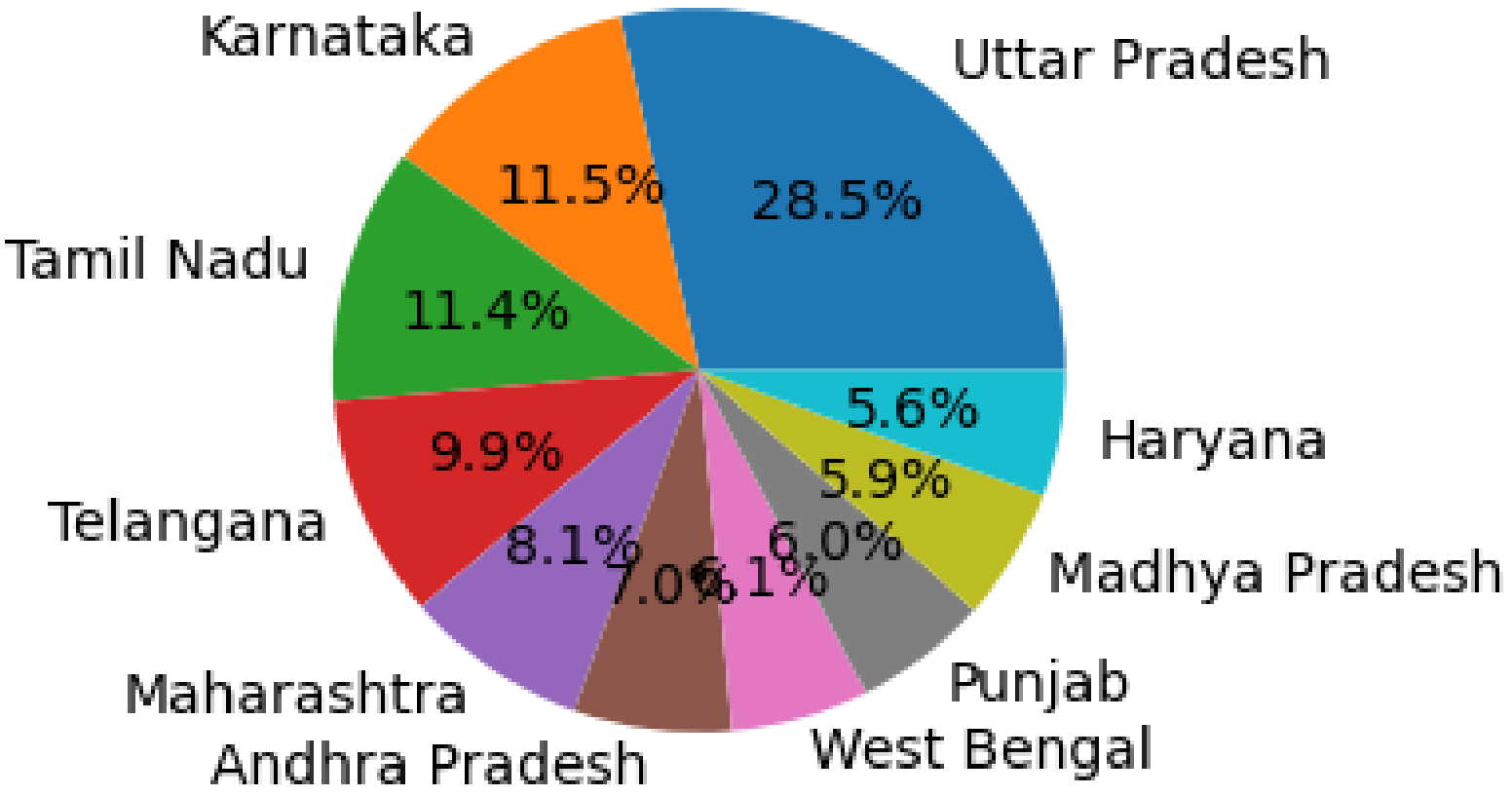

Probability Distribution of CollegeTier
Probability
CollegeTier


Probability Distribution of Quant
Probability
Quant

❖ 2.Univariate Analysis.

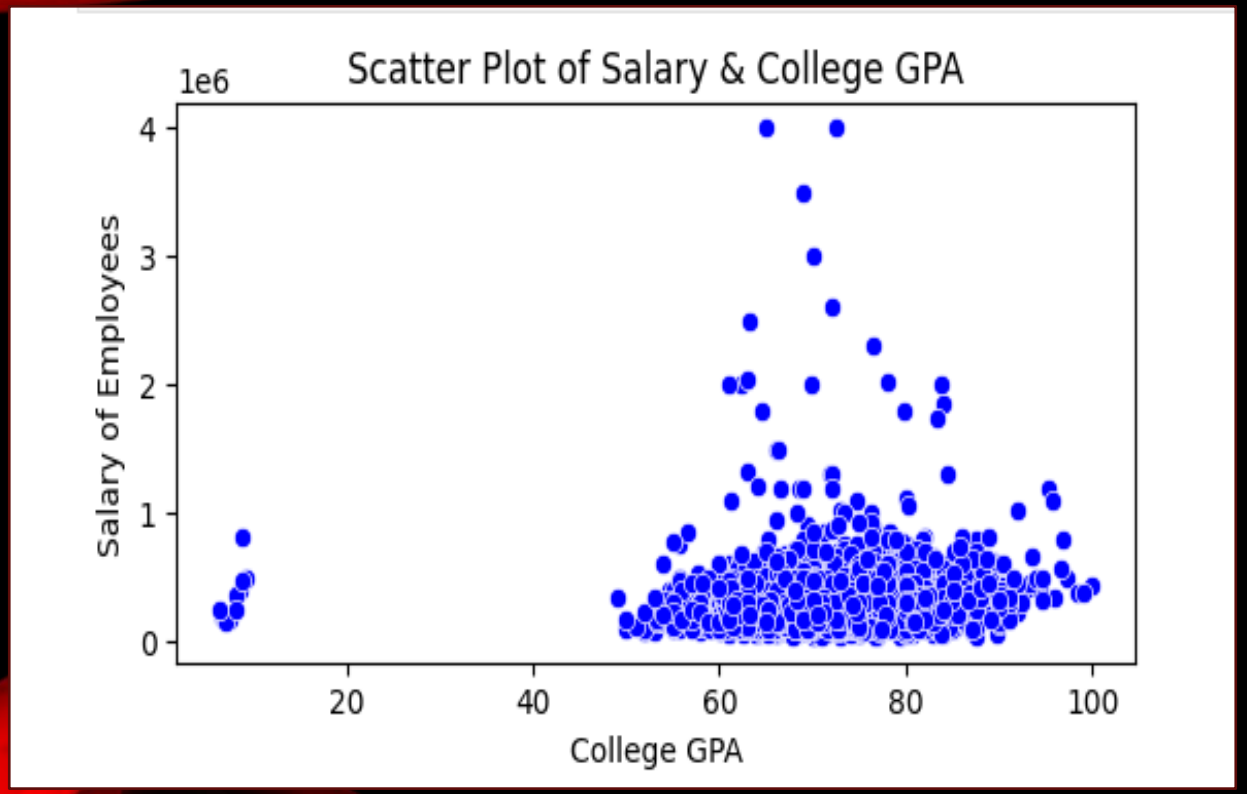
- ✓ Gender: There are more males than females in the data set.
- ✓ 10th and 12th boards: Mostly from the state board or CBSE.
- ✓ Degree: Mostly B.Tech/B.E.
- ✓ Specialization: Most of the engineers are from CS, IT, and Electronics Communication.
- ✓ Geographic: Most appeared for the MCAT from Uttar Pradesh.

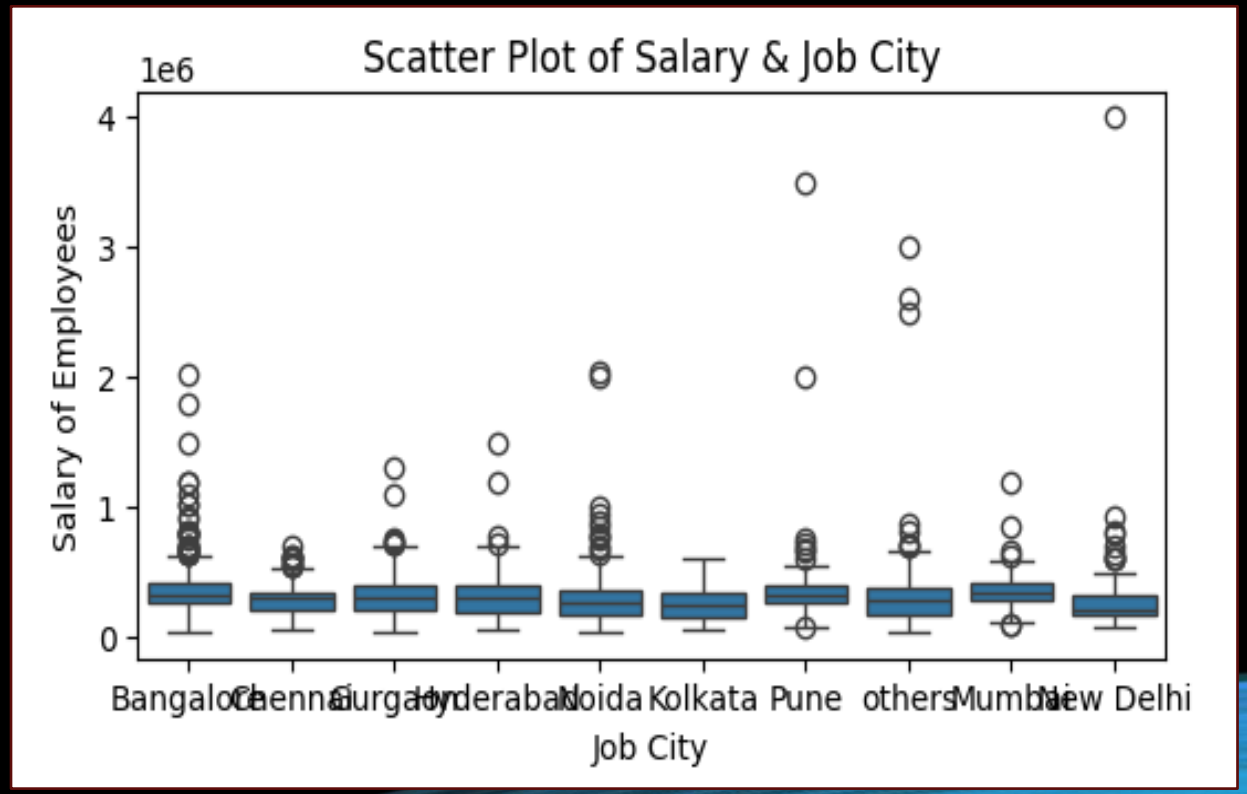
Top 10 States who have appeared in AMCAT exam



❖ Bivariate analysis

- ✓ College GPA vs Salary: Most have a GPA between 60 and 90 and earn between ₹2 lakh and ₹10 lakh per annum.
- ✓ Degree Type: M.Tech graduates earn higher salaries as compared to B.Tech.
- ✓ Gender and Knowledge: No significant differences were found.
- ✓ Wages by gender: slightly higher wages for men compared to women.
- ✓ Those who do not give details of the 12th Board or earn more than ICSE.


Scatter Plot of Salary & College GPA
1e6
Salary of Employees
College GPA
0
1
2
3
4
20
40
60
80
100


Scatter Plot of Salary & Job City
1e6
Salary of Employees
Job City
0
1
2
3
4
Bangalore
Chennai
Gurgaon
Hyderabad
Noida
Kolkata
Pune
others
Mumbai
New Delhi

Thank you!