



INNOVATION. AUTOMATION. ANALYTICS

PROJECT ON

**Exploratory Data Analysis (EDA) on Aspiring Mind
Employment Outcome 2015 (AMEO) Dataset**

About me

- I am Aarsha Anil, a graduate in B.Tech Artificial Intelligence and Data Science from Vimal Jyothi Engineering College.
- I am deeply passionate about data science and have been actively working on various data science projects. Although I don't have professional work experience yet, I have gained hands-on experience through internships, including developing a movie recommendation system using collaborative filtering. I am eager to pursue a career in data science and further enhance my skills in this field.
- Below are my GitHub and LinkedIn profiles:
- **GitHub:**<https://github.com/899-12>
- **LinkedIn:**<https://www.linkedin.com/in/aarsha-anil-20744222a/>

Business Problem and Use case domain understanding:

The business problem is centered around understanding the employment outcomes of engineering graduates. The dataset comes from the domain of Education and Employment, particularly focusing on the engineering field. This project aims to address the hiring trends for fresh graduates in various engineering disciplines and the factors that impact their salaries and job placements.

Objective of the Project:

The Aspiring Minds Employment Outcome 2015 (AMEO) study reveals key factors influencing engineering graduates' employability, including gender, specialization, cognitive skills, and personality traits. Cognitive abilities and technical skills are crucial, while adaptability and conscientiousness also play roles in job placement. These insights can help educational institutions, employers, and policymakers improve training, recruitment, and initiatives to enhance graduate employability and reduce gender disparities.

Summary of the Data:

The Aspiring Minds Employment Outcome 2015 (AMEO) dataset includes around 4,000 engineering graduates, featuring 40 independent variables, both continuous and categorical. Key variables cover demographic details, cognitive, technical, and personality skills, alongside employment outcomes like salary, job titles, and job locations. The dataset contains standardized scores for skills and a unique identifier for each candidate, providing insights into factors influencing employability in engineering disciplines.

Exploratory Data Analysis:

- a. Data Cleaning Steps:** Replace or remove missing values where necessary and also used IQR to identify and handle outliers in salary and other numerical columns.
- b. Data Manipulation Steps:** Prepared data for analysis through cleaning
- c. Univariate Analysis Steps:** Analyzed individual variables through the use of histograms, box plots, and count plots.
- d. Bivariate Analysis Steps :** Examined relationships between variables using scatter plots, pair plots, and bar charts.

Key Business Question : Is there a significant relationship between engineering specialization and salary outcomes?

Conclusion: Graduates in Computer Science and Electrical Engineering generally earn higher salaries compared to other specializations. A positive correlation between cognitive skill scores and salary suggests that employers value problem-solving abilities. While no strong gender-based preferences in specialization were found, female graduates were slightly underrepresented in higher-paying roles. Additionally, cities like Bangalore and Chennai emerged as key hubs for higher-paying engineering jobs.

Q&A Slide : How can these findings help engineering colleges improve their curriculum?

Your Experience/Challenges working on Data Analysis Project: Throughout the project, I have faced challenges such as managing missing data, addressing outliers, and ensuring the accuracy and reliability of our analysis. Despite these challenges, the project provided valuable learning opportunities, enhancing my skills in data cleaning, analysis, and visualization. Ultimately, the experience highlighted the importance of perseverance and adaptability in data analysis projects.

THANK
YOU

