Engineering Student Placement Analysis Report

1. Project Overview

The objective of this project is to analyze engineering student placement outcomes and identify the key academic, skill-based, and behavioral factors influencing employability. The analysis is presented using an interactive Power BI dashboard to support data-driven decision-making for academic institutions and placement teams.

---

2. Dataset Description

The dataset contains records of **5,000 engineering students** and includes information related to:

- Branch (CSE, ECE, IT, ME, CE)
- Placement status
- Salary (LPA)
- CGPA
- Internship experience
- Project completion count
- Hackathon participation
- Attendance percentage
- Stress levels
- Sleep hours
- Coding, aptitude, and communication skill ratings
- Gender, city tier, and family income level

Basic data cleaning and formatting were performed to ensure accuracy and consistency before analysis.

---

3. Tools & Technologies Used

- **Power BI** – Data visualization and dashboard creation

- **DAX** – Calculated measures (Placement Rate, Average Salary, KPIs)
- **Excel** – Data preprocessing and validation
- **Python** – Used NumPy and Pandas for basic Information.

---

4. Dashboard Structure

Page 1: Placement Overview

- Total Engineering Students
- Placed Students
- Average Salary (LPA)
- Placement Rate
- Placement status distribution
- Branch-wise placed student analysis

Page 2: Academic & Experience Analysis

- Placement by city tier
- Impact of hackathon participation
- CGPA vs placement trends
- Internship experience vs placement outcome
- Effect of project completion on placements

Page 3: Skills & Behavioral Analysis

- Impact of stress levels on placement
- Attendance vs placement probability
- Coding, aptitude, and communication skill influence
- Sleep hours vs average salary

Page 4: Executive Summary

- KPI snapshot
- Key insights

- Actionable recommendations

---

5. Skills & Behavioral Insights

- Strong **coding and aptitude skills** are key drivers of placement.
- Communication skills positively influence hiring outcomes.
- Students with **moderate stress levels** perform better in placements.
- **7–8 hours of sleep** aligns with higher average salary offers.
- Consistent attendance improves overall placement probability.

---

6. Placement Overview Summary

Out of **5,000 engineering students**, **4,303 students were successfully placed**, resulting in an overall **placement rate of 86.06%**. The **average salary offered is ₹16.15 LPA**, indicating strong placement performance across technical disciplines.

---

7. Key Recommendations

- Encourage project-based learning and real-world problem-solving across all branches.
- Expand internship and hackathon opportunities, especially for non-IT branches.
- Strengthen placement training initiatives for Mechanical and Civil departments.
- Promote balanced academic routines to support student performance and well-being.

---

8. Conclusion

This analysis highlights that placement success is influenced not only by academic performance but also by practical exposure, technical skills, and behavioral factors. The dashboard provides actionable insights that can help institutions improve placement strategies and better prepare students for industry requirements.