Placement Statistics Analysis: Delhi Technological University (DTU)

Abstract

This report presents a comprehensive analysis of the placement statistics of Delhi Technological University (DTU). The objective is to uncover trends and insights linking academic performance, branch specialization, job roles, and salary packages. By studying correlations between CGPA, CTC, and other key variables, this analysis aims to identify the academic and professional factors influencing successful placements.

Introduction

Campus placements play a pivotal role in shaping the career trajectory of engineering graduates. Understanding the relationship between academic metrics such as CGPA and professional outcomes like Cost to Company (CTC) helps students and mentors make informed decisions. This analysis explores DTU placement data to identify patterns across branches and roles, offering a data-backed perspective on employability trends.

Dataset Overview

The dataset used for this analysis contains details of students' CGPA, branch, role offered, offer duration, gender, and corresponding CTC. Initially, the dataset included 13 columns. Fields such as *Company*, *Stpd*, *Details*, and *Additional Info* were excluded due to missing or irrelevant data. Missing values in the *Role* column were imputed with "NO DATA," while CGPA and CTC missing values were retained as NaN for transparency. Duplicate entries were removed to ensure data integrity.

Methodology

A structured exploratory data analysis (EDA) approach was followed: - Data cleaning and preprocessing to handle missing and duplicate values. - Descriptive statistical analysis to understand the spread and distribution of CGPA and CTC. - Comparative study across branches and job roles. - Correlation analysis between CGPA and CTC. - Benchmarking based on CTC thresholds ($\geq$30 LPA and 12–30 LPA).

Analysis & Insights

CGPA Distribution

- **Mean:** 8.22 | **Median:** 8.36 | **Range:** 4.65–9.89
  The most frequent CGPA among placed students lies around 8.5, indicating that consistent academic performance strongly aligns with placement success.

CTC Distribution

- **Mean:** 16.52 LPA | **Median:** 12.6 LPA | **Range:** 3.3–85 LPA
  Most students fall within the 10–12 LPA range, with a smaller cohort achieving packages beyond 30 LPA.

CTC Benchmarks by Branch

Students achieving **≥30 LPA** predominantly belonged to Computer (CO), Software (SE), and Information Technology (IT) branches, with mean CGPA values between 8.75 and 8.90. For those in the **12–30 LPA** range, branches such as CO, IT, SE, and ECE continued to dominate, reaffirming the advantage of computer-related disciplines in high-value placements.

CGPA Requirements by Role

Roles such as **Analog Engineer (≈9.54 CGPA)** and **Application Engineer (≈9.18 CGPA)** had the highest academic thresholds. Software-related positions averaged **≈9.08 CGPA**, suggesting stable academic expectations. Broader roles like **Analyst (≈8.09)** and **Data Science (≈7.73)** indicated moderate variation, while generalized "Other" roles reflected the lowest average CGPA (≈7.04), signifying more flexible eligibility.

CTC and CGPA Correlation

A correlation coefficient of **0.47** signifies a moderately strong positive relationship between CGPA and CTC. Students with CGPA above 8.0–8.5 generally secured packages exceeding 30 LPA. This trend reinforces the impact of sustained academic performance on placement outcomes.

Branch-wise CTC Variation

Branches such as CO, IT, and SE recorded the highest average CTCs, whereas traditional core branches like Mechanical (ME) and Civil (CE) showed lower averages. Nonetheless, a few outliers from Electrical (EE) and ECE branches achieved exceptional packages, highlighting that interdisciplinary skillsets can enhance prospects even in non-software streams.

Role-wise CTC Variation

Software Development Engineer (SDE) roles accounted for the largest placement share (over 580 students) with average CTCs around **20–22 LPA**. Specialized roles like **Analog**, **Digital**, and **Application Engineer** exhibited higher average salaries despite smaller sample sizes. The "Other" category demonstrated the lowest average CTC, suggesting a mix of diverse, lower-paying profiles.

Key Findings

1. **Academic performance matters:** A CGPA of 8.5 or higher significantly improves chances of securing premium CTC offers.
2. **Branch influence:** Computer-related branches dominate the high-paying segments, while core branches face limited opportunities but remain valuable for specialized roles.
3. **Role specialization:** Technical and niche roles demand higher CGPA and offer superior compensation compared to general roles.
4. **Consistent patterns:** The majority of top-tier offers align with strong academic credentials and software-related expertise.

Conclusion

The placement analysis at DTU highlights a clear academic-performance-driven ecosystem. Students from computing branches with CGPA above 8.5 consistently secure top-tier placements. However, opportunities for core and interdisciplinary fields can be enhanced through skill diversification and project-based experience. The study underscores the importance of continuous learning, practical exposure, and academic diligence in bridging the gap between education and employability.