Placement Analytics Using Tableau

1.Objective

The aim of this project is to analyze and visualize student placement data across branches, companies, and years using Tableau. This helps identify patterns in hiring trends, salary distribution, and department-level performance.

2. Data Fields Used

- **Student ID**
- **Graduation Year**
- **Branch**
- **Gender**
- **Placement Status** (Placed / Not Placed)
- **Company Name**
- **Salary Offered**

3. Key Metrics & Calculated Fields

- Placement Rate (%)
  Formula: SUM (IF [Placement Status] = 'Placed' THEN 1 ELSE 0 END)

- COUNTD([Student ID])

- Average Salary per Branch

- Average Salary per Company

- Total Salary Offered by Company

- Student Count per Company

Visualizations Created

1. Graduation Year vs No. of Students Graduated

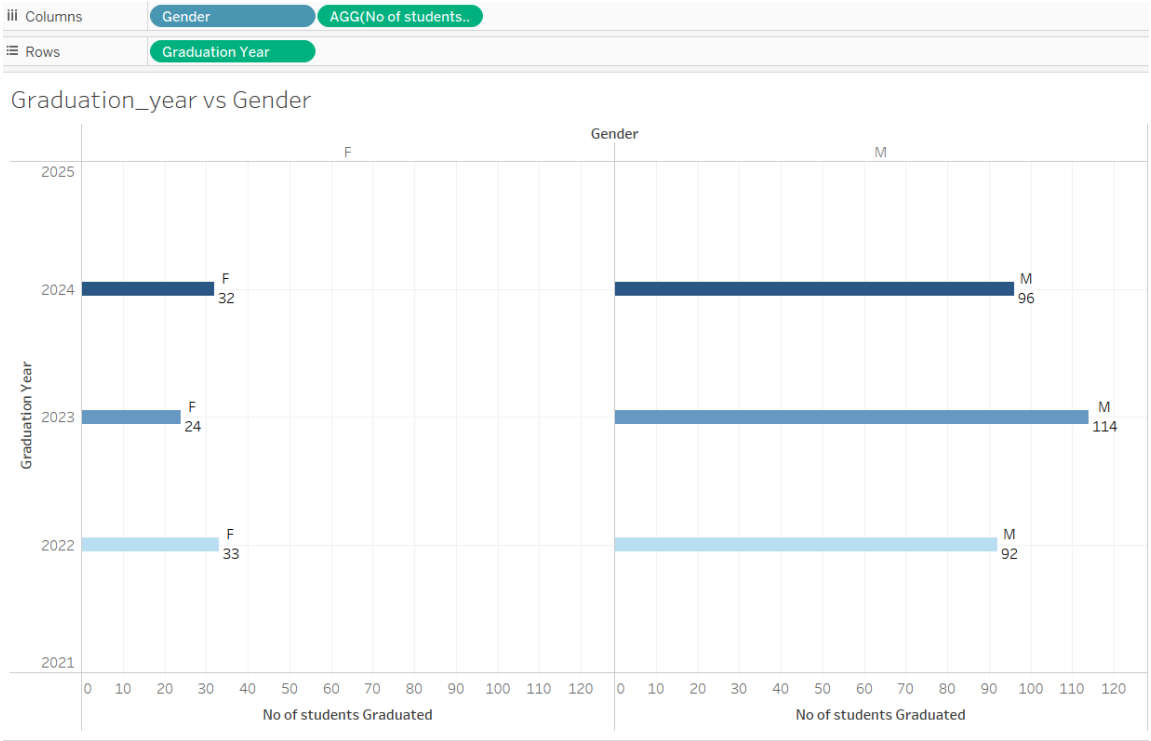
Description: This visualization shows the number of students graduating each year from 2022 to 2024.

Insights:

- 2022: 125 graduates
- 2023: 138 graduates (highest)
- 2024: 128 graduates

Conclusion: The highest number of graduates was in 2023. The numbers remained consistent, indicating steady enrollment and program completion rates.

2. Gender vs Graduation Year



Description: This chart breaks down the number of students graduated per year by gender, providing insights into gender distribution over time.

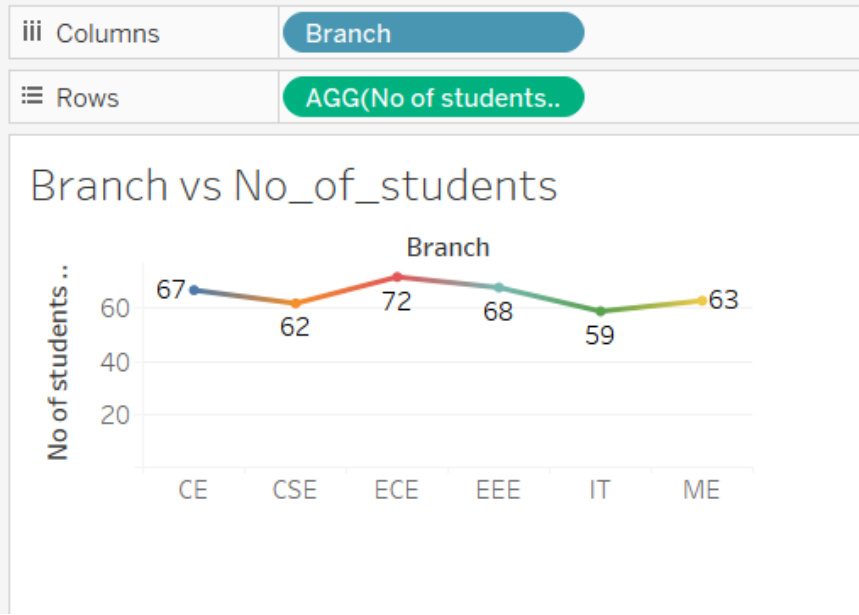
Insights:

Male students consistently outnumber female students each year.

- 2022: 92 Male, 33 Female
- 2023: 114 Male, 24 Female
- 2024: 96 Male, 32 Female

Conclusion: While male students dominate the graduating population, female graduation numbers remain relatively stable across the years.

3. Branch vs No. of Students Graduated ignoring year



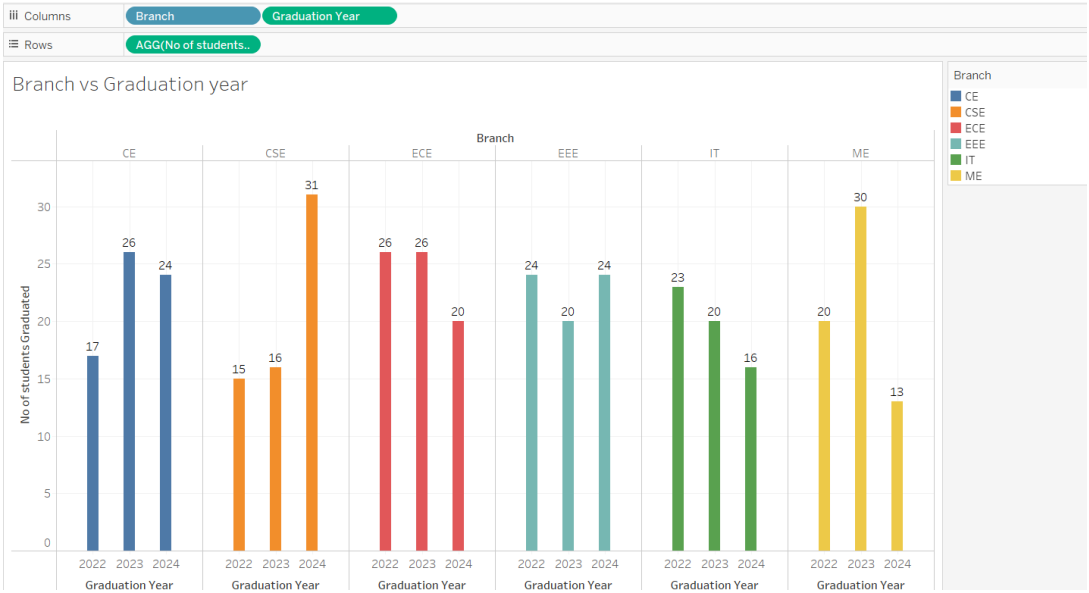
Description:
This line chart shows the total number of students in each branch, regardless of graduation year or placement status.

Insights:

- **ECE** has the highest number of students (72), followed by **CE** (67), and **EEE** (68).
- **IT** has the lowest count (59), with other branches like CSE and ME close to average.

Conclusion:
ECE and CE appear to be the most popular or largest branches in terms of student enrollment, while IT has the lowest student headcount. These figures may affect placement patterns and resource planning in each department.

4. Branch vs No. of Students Graduated in 2022-2024



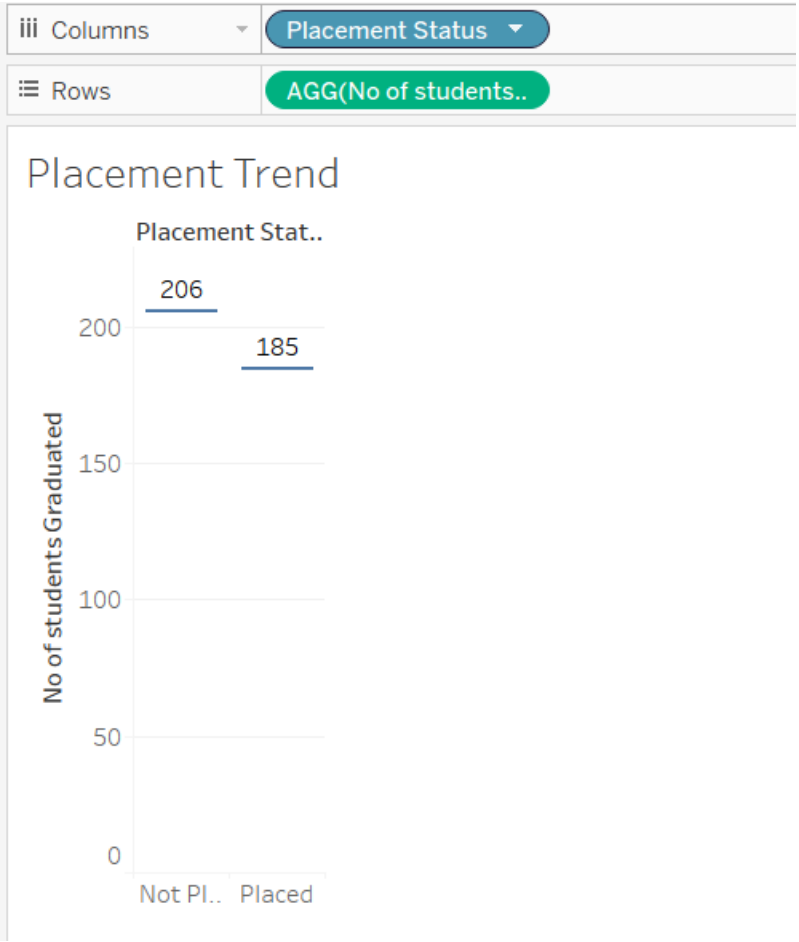
Description: This visualization displays the number of students from each branch who graduated in the years 2022 to 2024.

Insights:

- CSE has the highest number of graduates in 2024 (31)
- ME peaked in 2023 (30)
- Other branches like EEE and ECE maintained balanced output

Conclusion: Graduation rates vary significantly by branch, with some like CSE showing a clear upward trend. This may correlate with demand in the job market.

5. Placement Trend



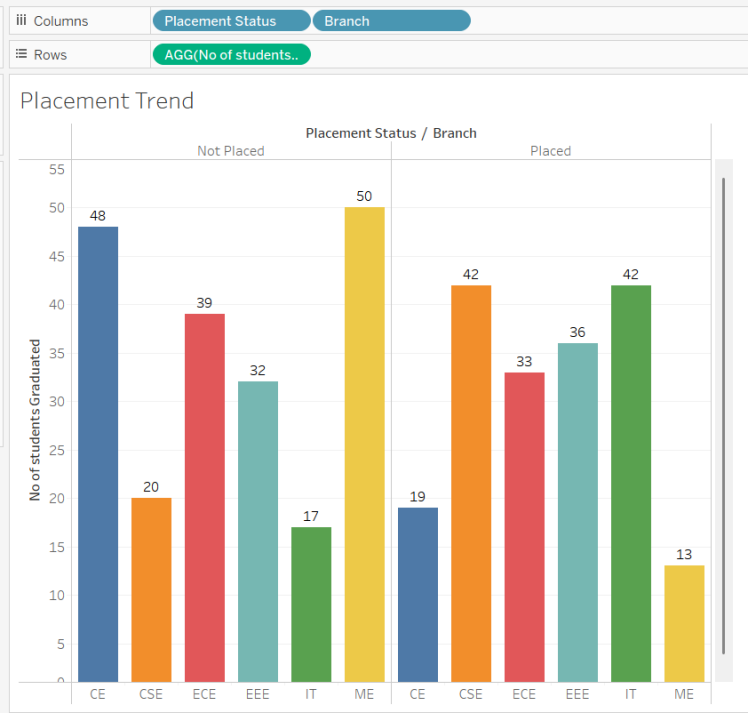
Description:
This bar chart compares the number of students who were placed versus those who were not placed after graduation.

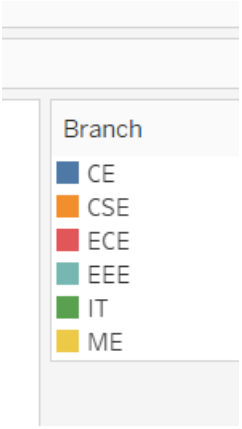
Insights:

- **185 students** were successfully placed.
- **206 students** were **not placed**, indicating a slightly higher number of unplaced graduates.

Conclusion:
The overall placement rate is below 50%, suggesting a need to strengthen career services, increase industry connections, or reassess curriculum alignment with job market demands.

6. Placement Trend by Branch





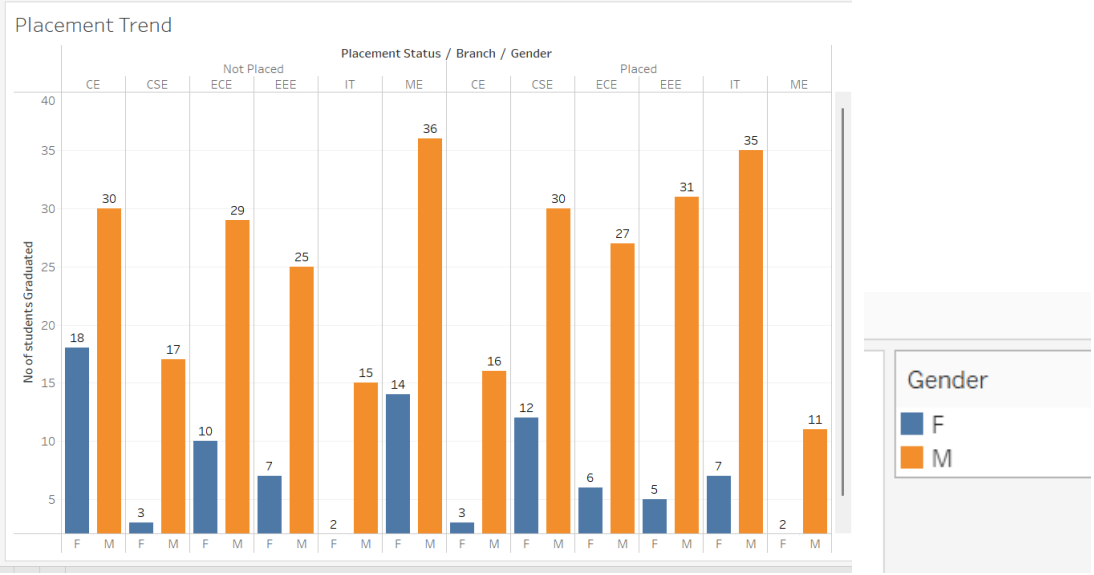
Description:
This grouped bar chart visualizes the number of students placed and not placed across different branches.

Insights:

- **CSE** and **IT** branches have the highest number of placed students (42 each).
- **ME** has the highest number of students **not placed** (50), despite a relatively smaller number placed (13).
- **CE** has a high number of not placed students (48), and only 19 placed.
- **EEE** shows a strong placement rate with 36 placed and 32 not placed.

Conclusion:
The **CSE** and **IT** branches are performing best in terms of placements, suggesting strong industry demand. Conversely, **ME** and **CE** branches need improvement in placement outcomes, indicating potential gaps in employability or market demand.

7. Placement Trend by Branch and Gender



Description:
This visualization illustrates the number of students placed and not placed, categorized by both **branch** and **gender**.

Insights:

- Across most branches, **male students** have higher placement rates than females.
- In **CSE** and **IT**, male placements dominate (30 and 35 respectively), but female placements are also relatively high (16 and 31).
- **ME** shows a significant gender gap with **36 males not placed** versus **14 females**.
- **CE** and **EEE** have noticeable gender imbalances in placement outcomes.

Conclusion:
There are gender disparities in placements across branches. Branches like **CSE** and **IT** have strong placements for both genders, while **ME** and **CE** show more pronounced gaps. These insights can guide gender-focused support initiatives in underperforming branches.

8. Placement Trend by Branch and Graduation Year

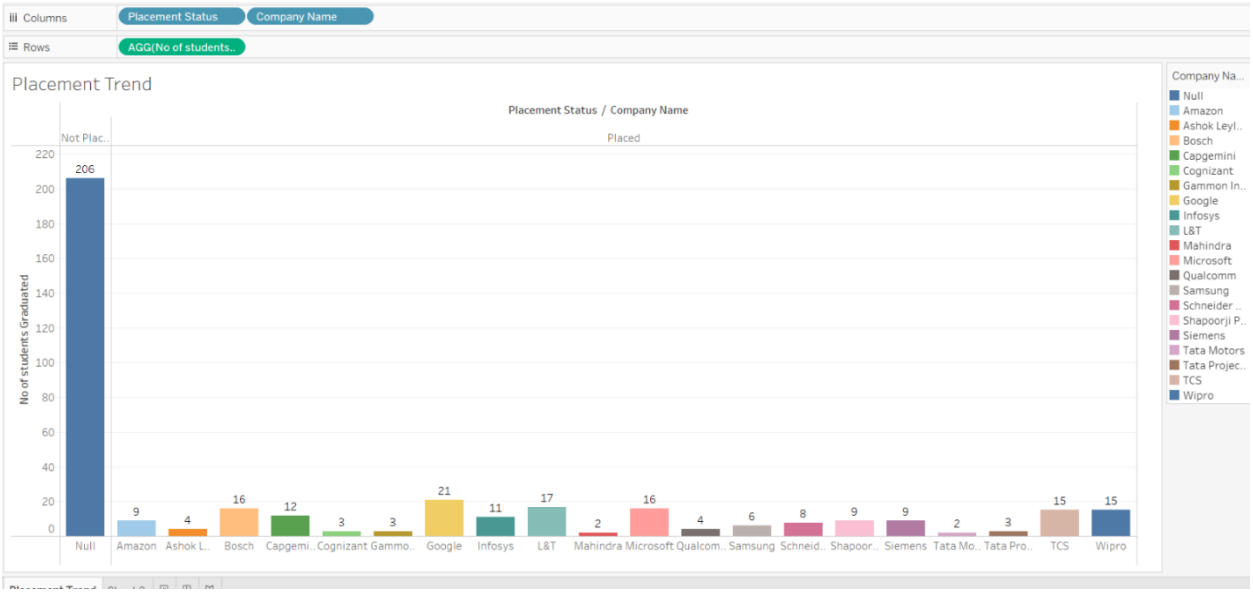
Description:
This visualization uses small multiples to display placement outcomes (Placed vs Not Placed) across each **branch** and **graduation year** (2022–2024). It provides a granular view of how placement trends evolve over time per branch.

Insights:

- **CE (Civil Engineering):** Placement improved in 2023 (11 placed) but dropped again in 2024.
- **CSE (Computer Science):** Placement numbers remained relatively high and consistent across all years.
- **ECE and EEE:** Noticeable fluctuations across years; in some years, the number of not placed students is equal to or exceeds those placed.
- **IT:** Shows the strongest placement in 2023 (15 placed) with consistently fewer not placed students.
- **ME (Mechanical):** In 2023, 15 were not placed versus only 6 placed, showing the largest imbalance.

Conclusion:
This chart reveals critical trends in placement performance across both **branches** and **time**. It highlights which departments may require more industry partnerships or student support, especially in years with declining placement numbers.

9. Placement Trend by Company



Description:

This bar chart displays the number of students placed in each company, compared with those not placed. The **"Not Placed"** category stands out with the highest count, offering a clear contrast with individual company recruitment numbers.

Insights:

- **206 students** were **not placed**, significantly higher than any company's intake.
- **Google** hired the most students among companies (21), followed by **Wipro (15)**, **Microsoft (16)**, **L&T (17)**, and **Infosys (11)**.
- Several companies such as **Tata Motors**, **Siemens**, and **Qualcomm** have relatively lower hiring numbers (2–5 students).
- **Conclusion:**
  A large number of students remain unplaced, emphasizing the need to improve placement strategies. However, tech companies like **Google**, **Microsoft**, and **Wipro** show strong recruitment activity, indicating a demand for students with relevant skills. This suggests targeted preparation for high-recruiting companies can enhance placement outcomes.

10. Company-Wise Placement by Branch

Description:

This dot plot provides a detailed breakdown of how many students from each branch were placed in different companies. Each dot represents the number of students placed from a particular branch into a specific company.

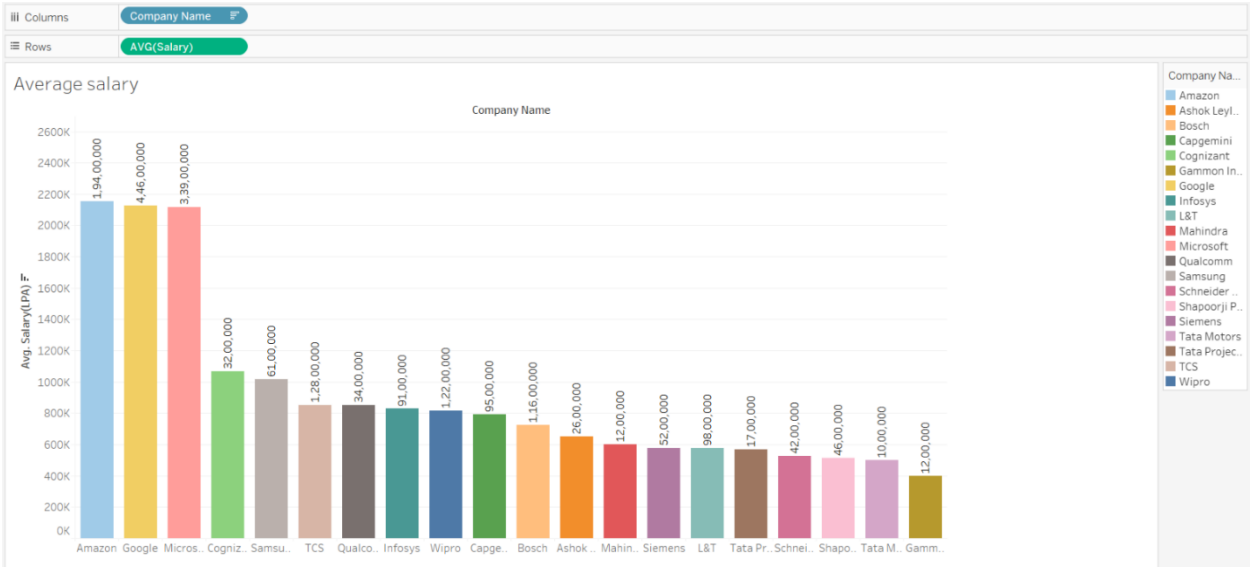
Insights:

- **CSE (Computer Science)** has strong placement figures across many companies, including:
  - **Google (11)**
  - **Infosys (6)**
  - **Wipro (6)**
- **ECE and EEE** have moderate distribution, with placements in companies like **Samsung**, **Qualcomm**, **Shapoorji Pallonji**, and **Schneider Electric**.
- **IT** students were recruited notably by **Wipro (6)**, **Microsoft (9)**, and **Infosys (2)**.
- **ME and CE** have lower placement diversity, with **ME** being recruited mainly by **Mahindra**, **Tata Projects**, and **Bosch**.

Conclusion:

The placement distribution is skewed heavily towards **CSE** and **IT** students, who are absorbed into a wide range of tech and consulting companies. Core branches like **ME** and **CE** have fewer options and tend to rely on traditional engineering firms. This highlights the ongoing industry trend favoring software and IT domains over core engineering.

11. Average Salary by Company



Description:

This visualization displays the average salary offered by each company that participated in campus placements.

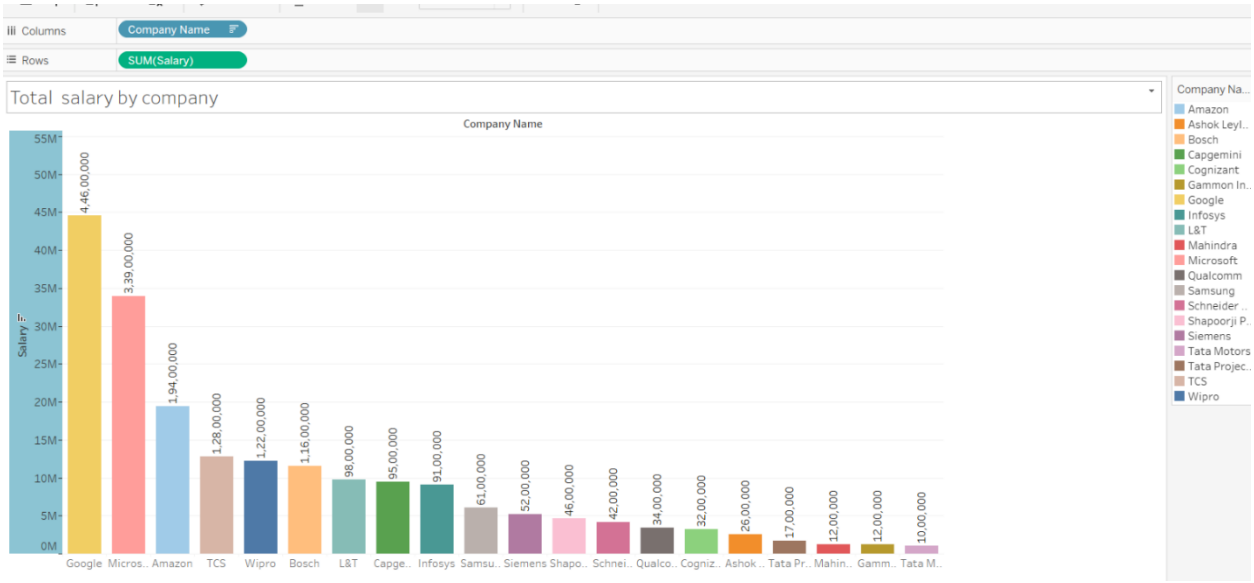
Insights:

- **Amazon** leads with the highest average salary of ₹24,00,000.
- **Google** and **Microsoft** follow closely with ₹19,00,000 and ₹18,00,000 respectively.
- Other high-paying companies include:
  - **Cognizant**: ₹12,00,000
  - **Samsung**: ₹10,00,000
- Companies like **TCS**, **Infosys**, and **Wipro** offer competitive but modest averages around ₹6,00,000–₹7,00,000.
- Traditional core companies such as **Bosch**, **L&T**, **Siemens**, and **Shapoorji Pallonji** offer lower average salaries in the range of ₹4,00,000 to ₹5,50,000.

Conclusion:

IT and tech giants offer significantly higher salary packages compared to core engineering firms. This further supports the earlier trend observed in placements—where branches like **CSE** and **IT** dominate both in placement numbers and salary packages.

12. Total Salary Offered by Company



Description:

This visualization presents the **total salary amount distributed** by each company during campus placements, based on the number of students placed and their offered salaries.

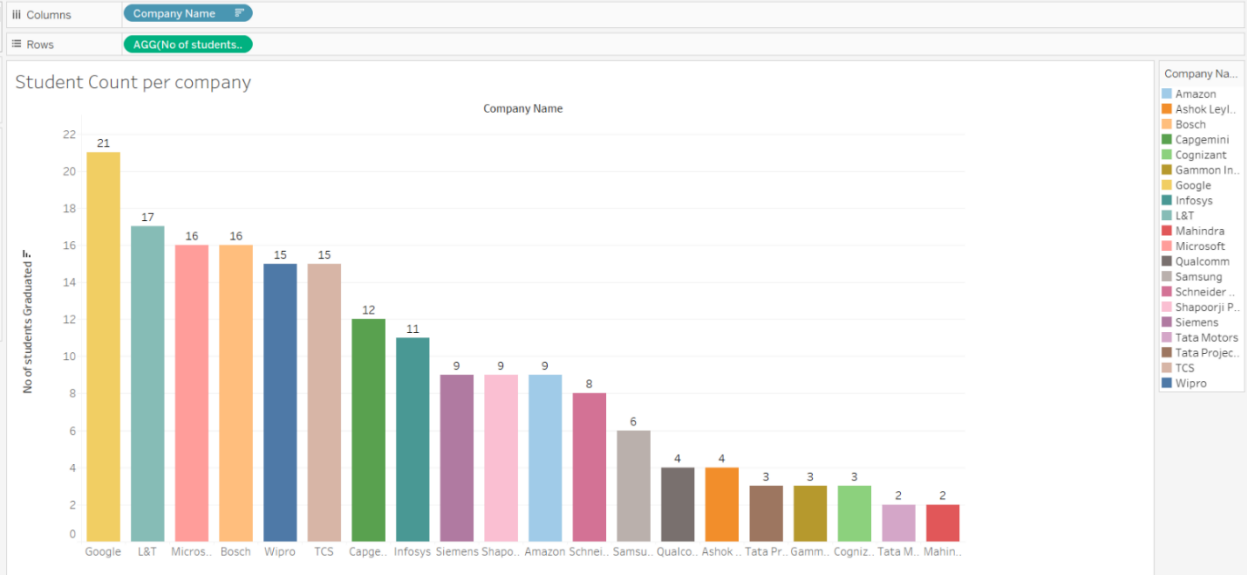
Insights:

- **Google** leads in total payout with **₹5.6 Crores**, followed by:
  - **Microsoft**: ₹4.6 Crores
  - **Amazon**: ₹3.9 Crores
- Other major contributors:
  - **TCS**: ₹1.8 Crores
  - **Wipro**: ₹1.6 Crores
  - **Bosch** and **L&T**: around ₹1.2 Crores each
- Many core companies like **Gammon India**, **Tata Motors**, and **Ashok Leyland** appear towards the lower end of the spectrum, with total payouts below ₹50 Lakhs.

Conclusion:

Tech giants not only offer the highest average salaries but also dominate total payouts, reflecting both high compensation and higher placement volumes. This makes them the most impactful recruiters in terms of salary investment.

13. Student Count per Company



Description:

This chart displays the **total number of students placed** in each company across all branches and years.

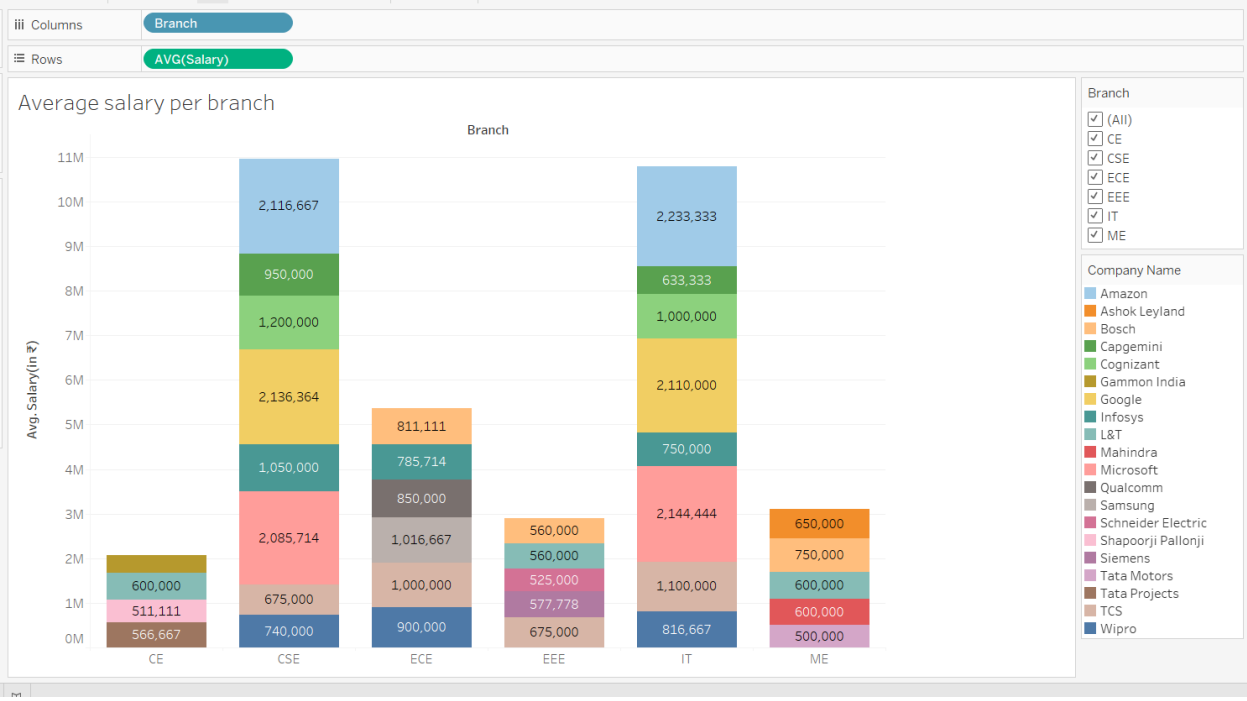
Insights:

- **Google** hired the most students: **21**
- Followed closely by:
  - **L&T**: 17
  - **Microsoft**: 16
  - **Bosch & Wipro**: 15 each
  - **TCS**: 15
- Other high recruiters include:
  - **Capgemini**: 12
  - **Infosys**: 11
  - **Siemens, Shapoorji Pallonji, Amazon**: 9 each
- Several companies hired in smaller numbers (2–4 students), such as **Gammon India**, **Tata Motors**, and **Qualcomm**

Conclusion:

Top tech and engineering firms dominate hiring, both in volume and value. While companies like Google offer fewer but high-paying jobs, others like L&T and TCS balance between volume and salary, showing diverse recruitment strategies across industries.

14. Average Salary per Branch



Description:

This stacked bar chart shows the **average salary offered** to students in each branch, broken down by company contributions.

Insights:

- **IT** branch students received the highest average salary overall, peaking at **₹2.23M**, with significant contributions from **Microsoft**, **Google**, and **Amazon**.
- **CSE** follows closely with salaries totaling over **₹2.11M**, showing strong placement in high-paying companies like **Google** and **Microsoft**.
- **ECE** and **EEE** branches show more balanced salary distributions across companies, with fewer extreme outliers.
- **ME** and **CE** branches have the lowest average salary aggregates, although they still show variety in placement (e.g., Tata Projects, L&T, Bosch).

Conclusion:

Students from IT and CSE branches benefit most from top-tier recruiters with higher salary packages. The variation across branches reflects market demand and specialization alignment with company requirements.

Insights & Observations

- **Graduation rates** remained steady, peaking in 2023.
- **CSE and IT** had the highest number of graduates and placed students.

- **Male students** were placed more often than female students across all branches.
- **Top recruiters** included Google, Microsoft, Amazon, L&T, and Wipro.
- **Highest salaries** were offered by tech companies (Amazon, Google, Microsoft).
- **ME and CE branches** had more unplaced students and lower salary averages.

Conclusion

CSE and IT branches lead in both placement numbers and salary outcomes. There is a noticeable gender gap and branch disparity in placements. Top tech companies contribute the most to placement quality. The Tableau dashboard effectively highlights these patterns, supporting strategic improvements in training and recruitment efforts.