**PRE-BUSINESS REPORT**

**1. Problem Statement**

The objective is to analyse the campus placement data to understand trends and patterns influencing student placements. This includes identifying key factors affecting placement outcomes, such as educational background, specialization, gender, work experience, and salary distribution, to derive actionable insights for improving future placement strategies

**2. Data Requirement**

* *Demographics*: Student count, gender, 12th-grade streams.
* *Educational Details*: Field/Stream (Comm & Mgmt, Sci & Tech, Others), specialization (Marketing & Finance, Marketing & HR).
* *Work Experience*: Whether students have prior work experience.
* *Placement Status*: Count of placed and not placed students.
* *Salary*: Average, median, and maximum salaries.

**3. Data Collection & Understanding**

The data was collected from campus placement records comprising 215 students. The dataset includes categorical (e.g., field, gender, placement status) and numerical variables (e.g., salary).

Key columns:

* *Student Demographics*: Gender, 12th-grade stream.
* *Educational Background*: Field/Stream, specialization.
* *Placement Details*: Work experience, placement status, salary

**4. Data Validation**

Data validation checks were performed to ensure:

* All records have complete and accurate data entries.
* No duplicate rows exist.
* Numerical data (e.g., salary) falls within expected ranges (minimum, median, and maximum salaries are consistent).
* Categorical data (e.g., gender, streams) is correctly coded without typos.

**5. Data Cleaning**

* *Missing Values*: No missing values were detected, ensuring completeness.
* *Outliers*: Salary outliers were reviewed and found consistent with realistic high-paying offers.
* *Categorical Data:* Verified that all categories (e.g., specializations, streams) are accurate.
* *Duplicates*: Checked and removed duplicates, if any.

**6. Tool Selection - Power BI**

Power BI was chosen for this analysis due to its:

* Ability to process and visualize complex datasets.
* Dynamic dashboard creation and interactivity.
* Strong integration with various data sources and ease of use for stakeholders.

**7. Graphs/Charts**

* **Univariate Analysis**:
* **Pie Charts**: Distribution of fields/streams and 12th-grade streams.
* **Bar Charts**: Count of students by specialization, placement status.
* **Bivariate Analysis**:
* **Bar Charts**: Students placed/not placed by gender.
* **Stacked Bar Charts**: Placement status by specialization and work experience.
* **Line/Bar Graphs**: Average salary by specialization and gender.
* **Multivariate Analysis**:
* **Combination Charts**: Cross-analysis of salary trends with placement status and gender.
* **Dynamic Filters**: Enabling segmentation by field, specialization, and experience.

8. **Dashboard**

**A screenshot of a computer

Description automatically generated**

**9. Storytelling**

* **Overall Context**

The dashboard evaluates placement performance across 215 students from different educational backgrounds and specializations. The metrics include the number of students, their educational streams, work experience, gender distribution, specialization, placement status, and salary trends.

* **Educational Background**
* **Field/Stream Distribution**: The majority of students (67.44%) come from **Commerce & Management (Comm & Mgmt)** fields, followed by 27.44% from **Science & Technology (Sci &Tech)**, and 5.12% from **Others**.
* **12th Grade Stream**: Students predominantly studied **Commerce (52.56%)**, followed by **Science (42.33%)** and **Arts (5.12%)** in their 12th-grade education.
* **Specialization and Work Experience:** Students are split between two primary specializations: **Marketing & Finance (Mkt & Fin)** and **Marketing & HR (Mkt & HR)**.  
  (For both specializations, a significant portion of students does not have prior work experience, though there is still a notable representation of experienced candidates).
* **Placement Status**
* **Gender-wise Placement**: Among students placed, the majority are females, while males have a higher proportion of those not placed. This indicates a gender-based disparity in placement outcomes.
* **Specialization-wise Placement**: **Marketing & Finance** specialization has a higher number of students placed compared to **Marketing & HR**.
* **Salary Analysis**
* **Average Salary**: The average salary stands at **₹ 288.66K**, with a **median salary of ₹ 265K** and a maximum salary of **₹ 940K**.
* **Specialization & Gender Influence on Salaries**: Male students in **Mkt & Fin** earned higher salaries compared to females, whereas salaries are more balanced in **Mkt & HR**.
* **Key Insights**
* Students from **Commerce & Management** backgrounds dominate the placements.
* **Marketing & Finance** specialization offers better placement and salary outcomes than **Marketing & HR**.
* Gender disparities are evident in placement and salary, with females performing better in placement rates and males earning slightly higher in specific specializations.
* Work experience is not a dominant factor influencing placements, as both experienced and non-experienced candidates are placed.
* **Conclusion:** This dashboard underscores the importance of specialization and educational background in influencing placement outcomes, while also revealing areas for improvement in gender equality and salary distribution.