BHARATIYA VIDYA BHAVAN'S
SARDAR PATEL INSTITUTE OF TECHNOLOGY
(Empowered Autonomous Institute Affiliated to University of Mumbai)
[Knowledge is Nectar]

Advance Data Visualization

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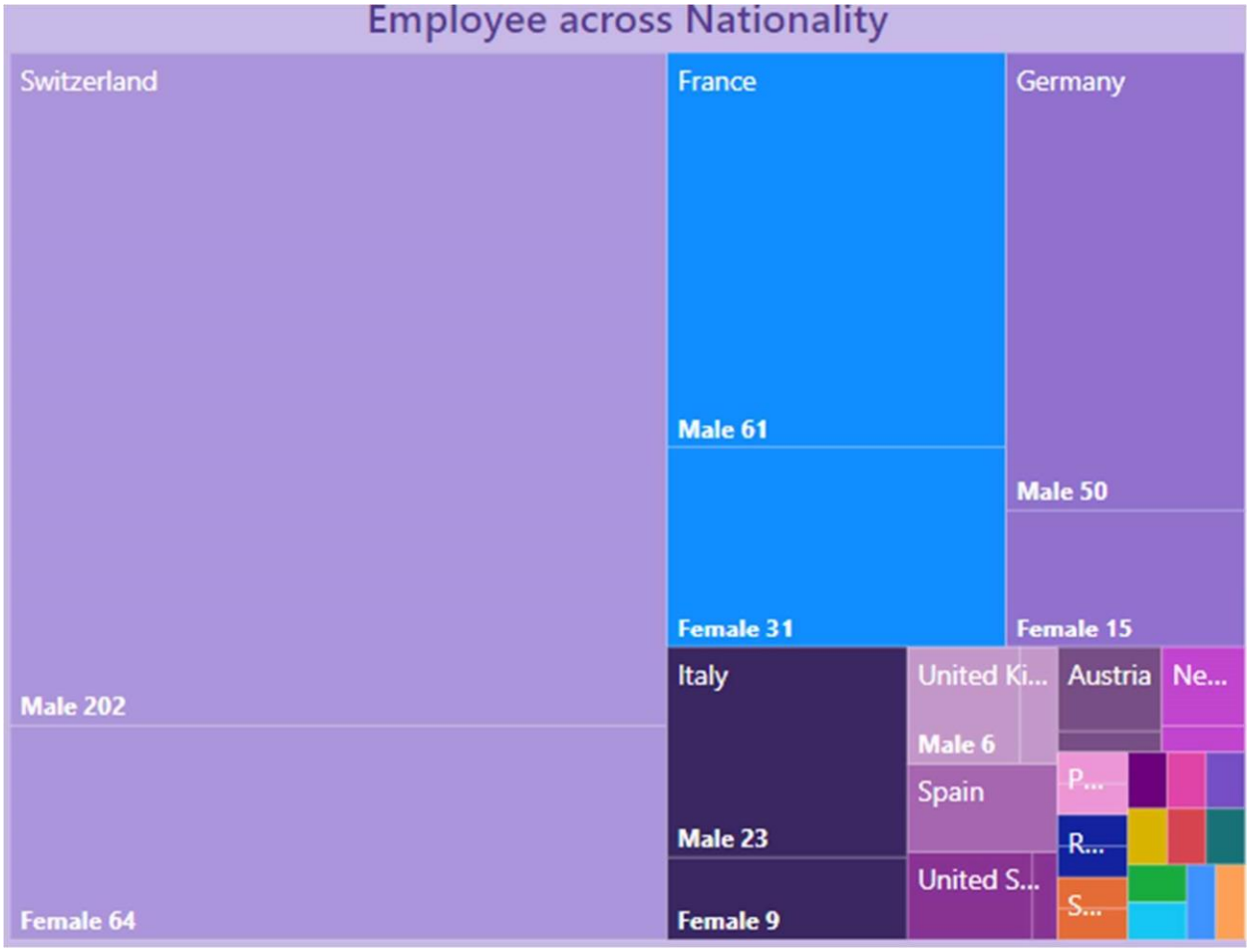
Aim	To effectively visualize and analyze large-scale datasets related to women empowerment and gender participation using Tableau, creating interactive and informative dashboards.

Objectives:

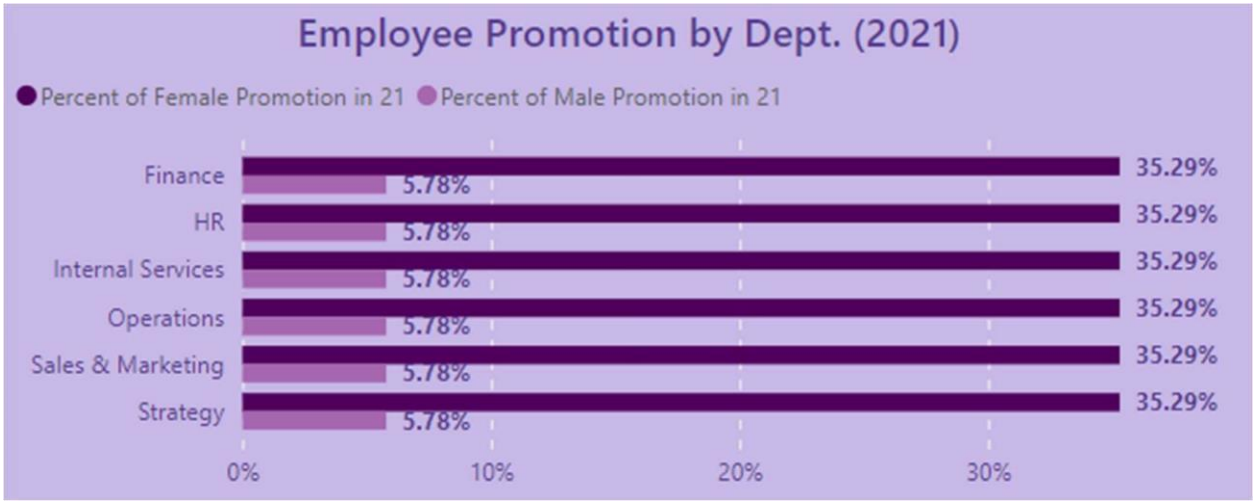
- Learn the fundamentals of Tableau and its application in data visualization.
- Create various chart types (basic and advanced) to represent different aspects of women empowerment data.
- Understand the significance of each chart type in conveying insights.
- Develop a comprehensive dashboard that integrates multiple visualizations for effective storytelling.



This treemap visualizes the distribution of employees across different nationalities and genders. The size of each rectangle represents the number of employees in that category, and the color distinguishes between male and female employees.

Insights:

- Dominant Nationalities: Switzerland and France have the highest number of employees, with Switzerland having a significant majority of male employees.
- Gender Distribution: While some nationalities like Switzerland and Italy have a higher proportion of male employees, others like Germany and France have a more balanced gender distribution.



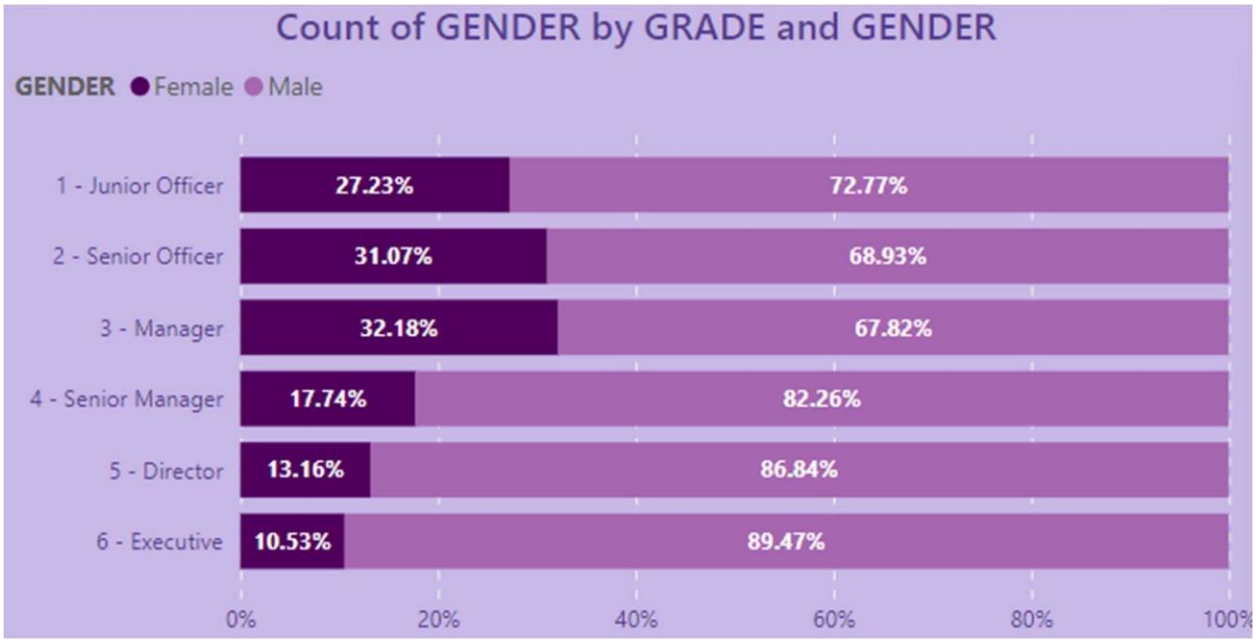
The chart illustrates the percentage of employees promoted within each department in 2021, with a clear distinction between male and female promotions.

Insights -

Gender Disparity: A substantial difference is evident in promotion rates between male and female employees across all departments.

Consistent Pattern: This disparity appears consistent across various departments, suggesting a systemic issue.

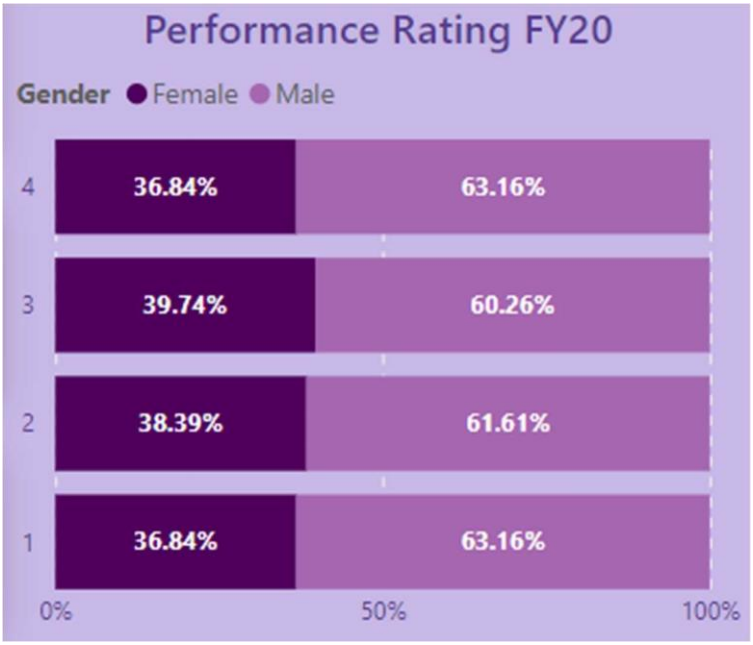
Limited Female Promotions: The percentage of female promotions is significantly lower than male promotions in every department.



The chart displays the distribution of employees across different job grades, categorized by gender.

Insights:

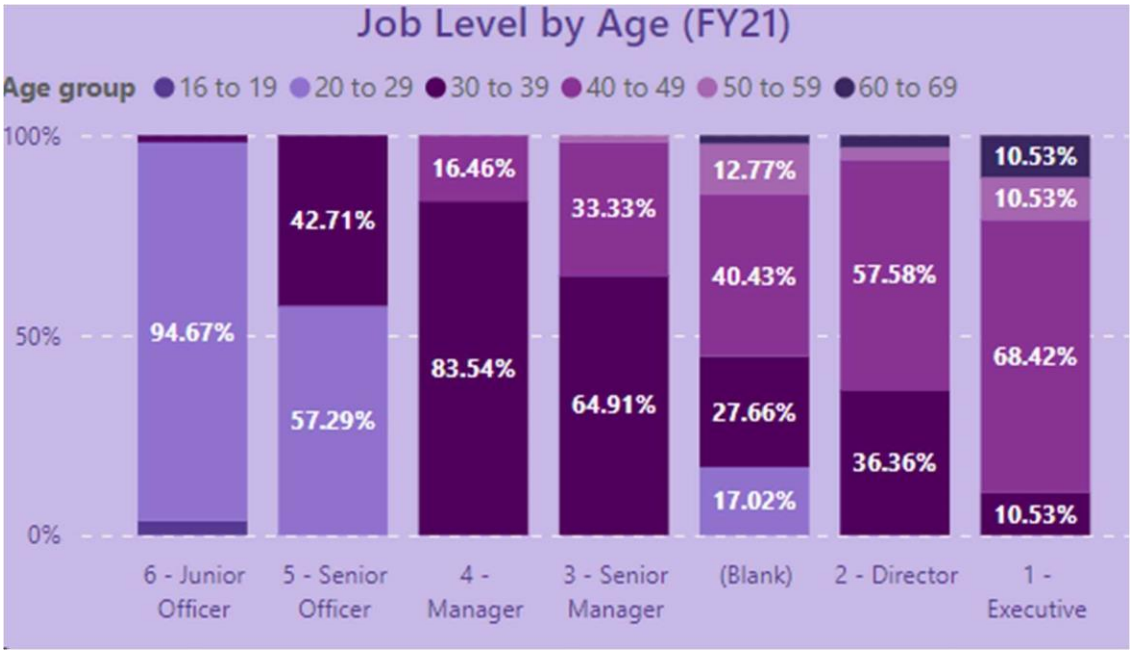
- Male Dominance: It is evident that males dominate higher-level positions. As the job grade increases, the percentage of male employees also increases.
- Female Representation: Female representation is higher in lower-level positions, particularly in Junior Officer and Senior Officer grades. However, their representation declines significantly as the job grade increases.
- Glass Ceiling: The trend suggests a potential "glass ceiling" where women face barriers to advancement to higher-level positions.



The chart displays the distribution of performance ratings (0-4) for male and female employees in FY20.

Insights:

- **Gender Disparity**: While there is no significant difference in the overall distribution of ratings between genders, a slight trend can be observed.
- **Higher Ratings for Males**: In ratings 1, 3, and 4, male employees have a slightly higher percentage compared to female employees.
- **Lower Ratings for Females**: Conversely, in rating 2, female employees have a slightly higher percentage than male employees.



The chart displays the distribution of employees across different job levels based on their age group in FY21.

Insights:

- **Age Distribution by Job Level**:
    - **Junior Levels**: The majority of employees in the Junior Officer and Senior Officer roles are in the younger age groups (16-19 and 20-29).
    - **Middle Management**: The 30-39 age group is well-represented in Manager roles.
    - **Senior Management**: The 40-49 and 50-59 age groups dominate the Senior Manager, Director, and Executive roles.
- **Age Diversity**: The chart indicates a lack of age diversity in certain job levels. For instance, there are very few younger employees in Executive roles and very few older employees in Junior Officer roles.

CONCLUSION:

Through this lab, I gained proficiency in using Tableau to create informative and visually appealing dashboards for women empowerment data.