**GALAXY COMPANY PROJECT DOCUMENTATION**

**Company Overview**

Galaxy, a Human Resource company, is facing a significant challenge with high employee turnover. This report aims to analyze the underlying factors contributing to this issue and provide actionable recommendations to improve retention**.**

**Problem Statement:**

The company is experiencing high employee turnover, and there is a need to understand the underlying causes and factors contributing to this issue. The analysis investigates patterns and trends in employee attrition, focusing on demographic characteristics, job roles, and departmental. By uncovering these insights, the goal is to identify key drivers of turnover and provide recommendations to enhance employee retention and reduce overall attrition rates.

**Project Objectives:**

1. Identify the Reasons for Employee Attrition
2. Analyze Turnover by Race and Gender
3. Track Turnover Trends Over Time
4. Turnover by Department and Location
5. Monitor the overall number of employees
6. Calculate Employee Termination Rate

**Data Overview:**

The Galaxy dataset provided contains detailed information on employee demographics, job roles, tenure, and termination records within the company. This data will be used to analyze employee turnover, uncover patterns, and identify key factors that may influence employee attrition.

**Data Sources** : Data was provided by the HR Department an Excel File

**Data Cleaning and Preprocessing Overview**

The Following actions were taken to clean the dataset to ensure accuracy and reliability of our analysis and all done on SQL

1. Data Import and Initial Setup:

* File Conversion: The original dataset, provided as an Excel file, was converted to CSV format for ease of import.
* Table Creation: A PostgreSQL table was created to store the data, and the CSV file was imported into this table.

2. Data Cleaning**:**

* Removed Duplicates
* Gender Standardization:
  + Replaced inconsistent gender codes (e.g., "M" and "Fm") with standardized values ("Male" and "Female").
* Table Duplication and Renaming
* Standardization of data.
* Inconsistent Data Removal

3. Exploratory Data Analysis (EDA):

* Data Summary: Reviewed the overall structure of the cleaned data to ensure it aligns with expected formats and contains no errors.
* Distribution Analysis: Examined the distribution of categorical variables (e.g., gender, race, department) to identify any patterns or imbalances.

4. Data Export and Further Use

* Exported Cleaned Data: The cleaned data was exported from PostgreSQL as an Excel file for further analysis.
* Re-import to Excel: The cleaned Excel file was re-imported into Excel for additional analysis and visualization.

**Key Insights**

1. The company is experiencing an overall turnover rate of 17.7%.
2. Female employees have a slightly higher attrition rate than male employees.
3. Statistician IV and Executive Secretary exhibit the highest turnover by job title, each nearing 100% and Sales Representative show lower rates
4. The highest attrition rate by age group falls under 30 at 18.10%. The rates gradually decline across older age groups, with those 50 and over having the lowest attrition at 17.00%.
5. Some racial groups are more likely to leave the company than others.

**Recommendations**

1. **Targeted Retention Strategies:** Develop tailored retention strategies for departments and employee groups with high turnover rates.
2. **Diversity and Inclusion Initiatives:** Enhance diversity and inclusion efforts to create a more inclusive work environment for all employees.
3. **Career Development Opportunities:** Invest in employee development and provide clear career paths to retain top talent.
4. **Exit Interviews:** Conduct thorough exit interviews to gather feedback from departing employees and identify areas for improvement.
5. **Remote Work Policies:** Evaluate the effectiveness of remote work policies in these regions and explore potential adjustments.
6. **Flexible Work Arrangements:** Consider providing more flexible work arrangements, such as remote work or flexible hours, to accommodate the needs of younger employees.
7. **Mentorship Programs:** Establish mentorship programs that pair employees from different backgrounds.

**Conclusion:**

The Galaxy HR Analytics Dashboard provides a comprehensive overview of employee turnover within the organization. The analysis reveals that turnover is influenced by a complex interplay of factors, including gender, department, geography, age, and race.

By implementing targeted retention strategies, promoting diversity and inclusion, and investing in employee development