EMPOWERING HR STRATEGY: INSIGHTS FROM SQL & TABLEAU ANALYTICS

INTRODUCTION

- ***Project Overview:*** This project focuses on conducting Exploratory Data Analysis (EDA) and creating visualizations for an HR dataset.
- ***Importance of EDA:*** EDA is crucial as it helps uncover patterns, relationships, and anomalies within the dataset, providing valuable insights for decision-making.
- ***Role of Data Visualization***: Utilizing Tableau for data visualization allows stakeholders to interpret complex HR data visually, facilitating informed and strategic decision-making processes.
- ***Tools and Technologies Used:*** The project utilizes MySQL and Tableau. Important MySQL concepts such as *Aggregations, Views, Store Procedures, Subqueries,* etc. are used for data pre-processing, cleaning and analysis. Tableau is used for creating charts and combing them to create a neat dashboard.

DATA SOURCING & PRE-PROCESSING

- ***Source Data Format:*** The source dataset is initially provided in CSV format, containing comprehensive information about employees including gender, salary, departments, race, satisfaction levels, engagement metrics, etc.
- ***Data Loading:*** The dataset is imported into a MySQL database using the Table Import Wizard, ensuring seamless integration and easy access for subsequent analysis.
- ***Data Pre-processing:***
    - ***Standardizing Column Names:*** Columns with inconsistent or improper naming conventions are renamed for clarity and consistency across the dataset.
    - ***Handling Data Types:*** Columns containing date information stored as text are converted to the date data type in MySQL, ensuring accurate date-based analysis.
    - ***Cleaning and Validation:*** Data cleaning processes such as handling missing values, correcting inconsistencies, and validating data integrity are performed to ensure the dataset is robust and reliable.
    - ***Utilization of MySQL Features:*** Advanced MySQL features including aggregations, views, stored procedures, and subqueries are leveraged to streamline data pre-processing tasks and enhance analytical capabilities.