INTERNSHIP REPORT FOR TWILEARN

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1. Introduction

My 2- months internship at TwiLearn as Data Science Intern included one month of online training sessions and further project development. I had the opportunity to work on two significant projects : HR Analytics Dashboard and Zomato Data Analysis.This internship helped me to gain experience in data analytics through practical applications, focusing on data collection, data cleaning & pre-processing , transformation, data analysis and data visualization.

2. About Projects

The problem statement and dataset were provided for both the projects. For the first one a dashboard was to be created to present the valuable insights and the second project included answering certain questions through analysis and visualizations.

A) Project 1: HR Data Analytics

Problem Statement : To create an interactive dashboard that would enable HR to analyze and further make data-driven decisions regarding the employee count, attrition count, employee performance and engagement.

Dataset :

The dataset consisted of columns showing employee details like employee id , gender, age group , attrition , department etc.

Key Objectives :

- To understand attrition count with respect to certain factors like age, gender, salary.
- To visualize key HR metrics that help in workforce planning.

Methods used :

1. Data Cleaning:
    - Filtered out blanks and missing values using Google Sheets.
    - Created Pivot Tables to understand key metrics.

2. Data Transformation:
    - Imported the Data in PowerBI and used PowerBI Query to replace values and create conditional columns for converting Attrition Data from categorical to numeric.

3. Dashboard Creation:
    - Identified key metrics like count of employees, Average age count, Salary count , Attrition Rate , Attrition count ,Average Years at company.
    - Further these key metrics were used to visualize Attrition by Education, Age , Job role and years at company.

B) Project 2: Zomato Data Analysis

Problem Statement: Given dataset for Zomato's restaurant data to derive customer preferences , restaurant performance and market trends.

Dataset:
The dataset consisted of 7 columns that has restaurant-related information namely name of restaurants , ratings , votes , listed type , online order , table booking and cost for two. It helps to understand customer preferences and restaurant performance.

Key Objectives :

1. Data Cleaning and Preprocessing :
    - Cleaned the ratings columns to extract numerical values from text entries.
    - Ensured no null values were present in the dataset.

2. Exploratory Data Analysis:
   Conducted thorough analysis to answer key business questions :
    - Identification of most popular restaurant types among customers.
    - Analysis of the total votes received by each restaurant type.
    - Insights into average spending habits of couples ordering food online.
    - Comparison of ratings between online and offline orders.

3. Visualizations :
   Created various visualizations to illustrate findings, including:
    - Countplots to depict customer preferences for different restaurant types.
    - Line plots to visualize voting trends across restaurant types.
    - Histograms representing the distribution of ratings.
    - Heatmaps to observe online versus offline orders for each restaurant type.

Conclusion **:**

The analysis provided actionable insights into customer dining preferences, highlighting trends that Zomato could leverage for targeted marketing and promotional strategies. Key findings revealed that dining restaurants were the most preferred choice, with online orders receiving higher ratings than offline orders.