Summary of all that I did in this project

Python

1. **Library Setup**:
    - Imported necessary libraries: pandas, numpy, matplotlib, seaborn, sklearn, and shap.
2. **Data Preprocessing**:
    - Loaded dataset (Dataset.csv) using pandas.
    - Checked for and removed any missing values.
    - Dropped irrelevant columns: 'EmployeeCount', 'Over18', 'StandardHours', 'EmployeeNumber'.
    - Converted the target column Attrition to binary (Yes = 1, No = 0).
    - Encoded categorical columns using LabelEncoder.
3. **Exploratory Data Analysis (EDA)**:
    - Plotted:
        - Countplot of **Attrition by Department**.
        - Boxplot of **MonthlyIncome vs Attrition**.
        - Histogram of **YearsSinceLastPromotion vs Attrition**.
4. **Modeling**:
    - Split data into training and test sets (80/20).
    - Trained a **Decision Tree Classifier**.

Power BI

1. **Visuals Created**:
    - **Stacked Column Chart**: Count of Attrition by **JobSatisfaction** and **Department**.
    - **Stacked Column Chart**: Count of EmployeeCount by **YearsSinceLastPromotion** and **Attrition**.
    - **Heatmap**:
        - Based on **JobRole** and shows **Count of Attrition**.
2. **Slicers Used**:
    - Gender, OverTime, and Department slicers for filtering the visuals.

Further detailed explanation is provided in the README file.