## Project Report 3: Human Resources Dataset Analysis

## Week 1: Build Data Model, Data Cleaning and Preprocessing

* **Tasks:**
  + **Data Preprocessing**: Build a data model, clean, and preprocess the dataset.
  + Tools: SQL, Python (pandas, Matplotlib).
  + **Used Python** to perform data cleaning, calculate mean, mode, and other basic statistical values.

## Week 2: Analysis Questions Phase

* **Tasks:**
  + **Determine Data Analysis Questions**: Develop analysis questions to explore employee performance and satisfaction based on factors like gender, age group, department, education, and overtime.
    - Example questions:
      * What factors impact employee performance?
      * How does overtime impact performance and job satisfaction?
      * How does education level affect employee career progression?
  + Tools: SQL, Python (pandas, Matplotlib).

## Week 4: Visualization Dashboard and Final Presentation

* **Tasks:**
  + **Build a Visualization Dashboard**: Create an interactive Tableau dashboard to visualize the data analysis results from Week 2. Add filters to enhance interactivity (e.g., department, job role, gender).
  + **Final Presentation**: Prepare a report and presentation that includes:
    - A project overview.
    - Interactive dashboard demonstration.
    - Business implications and recommendations based on findings.
  + Tools: SQL, Python (pandas, Matplotlib), Tableau.

**Note**: We have completed Week 1 and are currently working on Week 2, focusing on the analysis questions phase.