1. Project Overview

The UK Train Rides Data Analysis project aims to build a data model, clean and preprocess railway ticket transaction data, analyze trends, forecast future demand, and create a visualization dashboard to support decision-making. The project will leverage SQL, Python (pandas, Matplotlib, sci-kit-learn), and PowerBI for data processing, analysis, and visualization.

2. Project Objectives

- Develop a structured and cleaned dataset for analysis.

- Identify key trends and insights from the given railway dataset.

- Generate forecasting models to predict future train rides, revenue, and ticket class demand.

- Build an interactive visualization dashboard to present insights effectively.

- Prepare a final report summarizing findings and recommendations.

3. Project Scope

- **Data Preprocessing:** Clean and preprocess the dataset to ensure consistency and accuracy.

- **Analysis Questions Phase:** Identify meaningful data analysis questions for business decision-makers.

- **Forecasting Phase:** Predict future train rides, revenue trends, and ticket class demand.

- **Visualization Dashboard & Reporting:** Develop a PowerBi dashboard and compile a final report.