

# TASK-1

## Daily Public Transport Passenger Boardings Insights Report

**Date Range:** April 1st, 2023, to April 30th, 2024

### Introduction:

This report presents insights derived from the analysis of daily public transport passenger boardings data for the period spanning from April 1st, 2023, to April 30th, 2024. The dataset provides valuable information on passenger boardings across different modes of public transport in the region.

### Data Overview:

The dataset comprises daily records of passenger boardings, including the number of boardings for various modes such as buses, trams, and the MyWay system. Each record also includes the date of observation.

### Key Insights:

#### Temporal Trends:

Analysis of temporal trends reveals fluctuations in passenger boardings over the period. Significant peaks and troughs are observed, indicating variations in public transport usage across different days and months.

Seasonal patterns are evident, with increased passenger activity during certain months, possibly influenced by factors such as weather, holidays, or events.

#### Mode-wise Analysis:

Examination of passenger boardings across different modes of public transport shows varying levels of usage.

Buses appear to be the most frequently utilized mode, followed by the MyWay system and trams.

Understanding these usage patterns can aid in optimizing service schedules and resource allocation for each mode.

# TASK-1

## **Impact of External Factors:**

Anomalies in passenger boardings may be attributed to external factors such as public holidays, special events, or disruptions in service.

Identification of such events can facilitate proactive planning and response strategies to mitigate potential service disruptions and accommodate fluctuations in demand.

## **Correlation Analysis:**

Correlation analysis reveals potential relationships between passenger boardings and other variables, such as weather conditions, demographics, or economic indicators.

Identifying significant correlations can inform targeted interventions or policies aimed at enhancing public transport accessibility and affordability.

## **Recommendations:**

### **Data-driven Decision Making:**

Stakeholders are encouraged to leverage insights from the analysis to inform data-driven decision making processes related to public transport planning, operations, and infrastructure investment.

### **Predictive Modeling:**

Implementation of predictive modeling techniques can facilitate forecasting of passenger demand, enabling proactive resource allocation and service optimization.

### **Continuous Monitoring:**

Regular monitoring of passenger boardings and associated trends is essential to adaptively respond to changing passenger needs and preferences.

## **Conclusion:**

In conclusion, the analysis of daily public transport passenger boardings data provides valuable insights into usage patterns, temporal trends, and potential influencing factors. By leveraging these insights, stakeholders can make informed decisions to enhance the efficiency, accessibility, and sustainability of public transport systems.