

NAME OF DATASET:

Daily_Public_Transport_Passenger_Journeys_by_Service_Type

DATE: 03/12/25, Wednesday

UNDERSTANDING THE DATASET:

Time-series dataset which represents transportation planning and urban economics. It teaches me about how people are using a city's public transit network on a day-to-day basis.

INSIGHTS:

Bus Network Dominance: Rapid route and local route have dominated the other transportation. And even the Rapid Route is especially higher than the Local Route.

Peak Recovery Year: 2023 recorded the highest growth rate jump, marking the peak in ridership since the pandemic low.

Seasonality: The School, Peak Service and others columns frequently show zero counts on certain dates.

Variability: The system experiences extreme daily fluctuations, strongly indicating a huge difference between weekday/weekend or busy/holiday periods.

Below given figures are helped to get some insights based on the data.(Figure 1,2,3,4)

DATA VISUALIZATION:

Public Transport Journey Analysis: Composition and Seasonality



Figure. 1

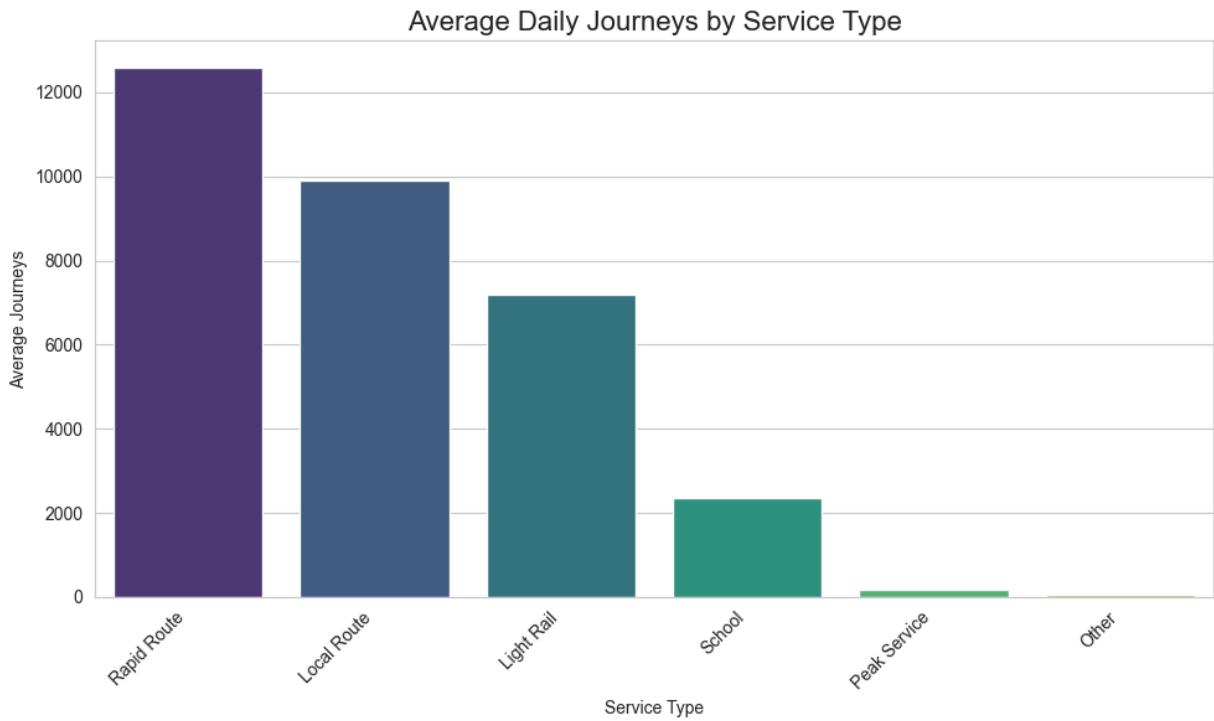


Figure .2

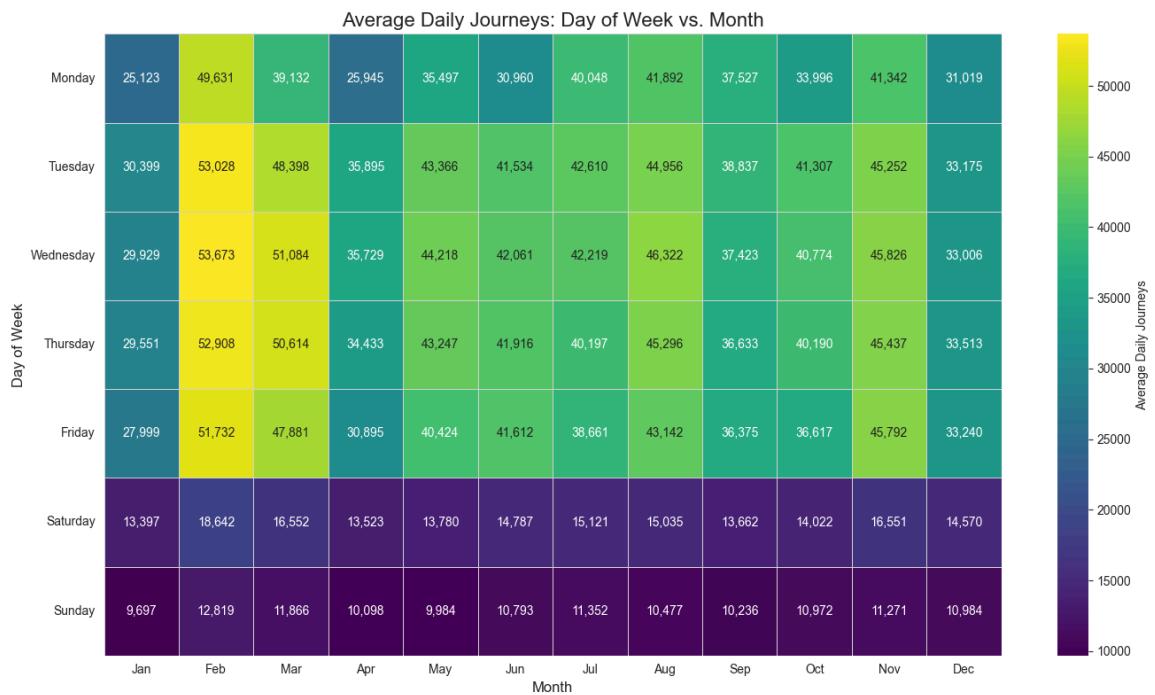


Figure. 3

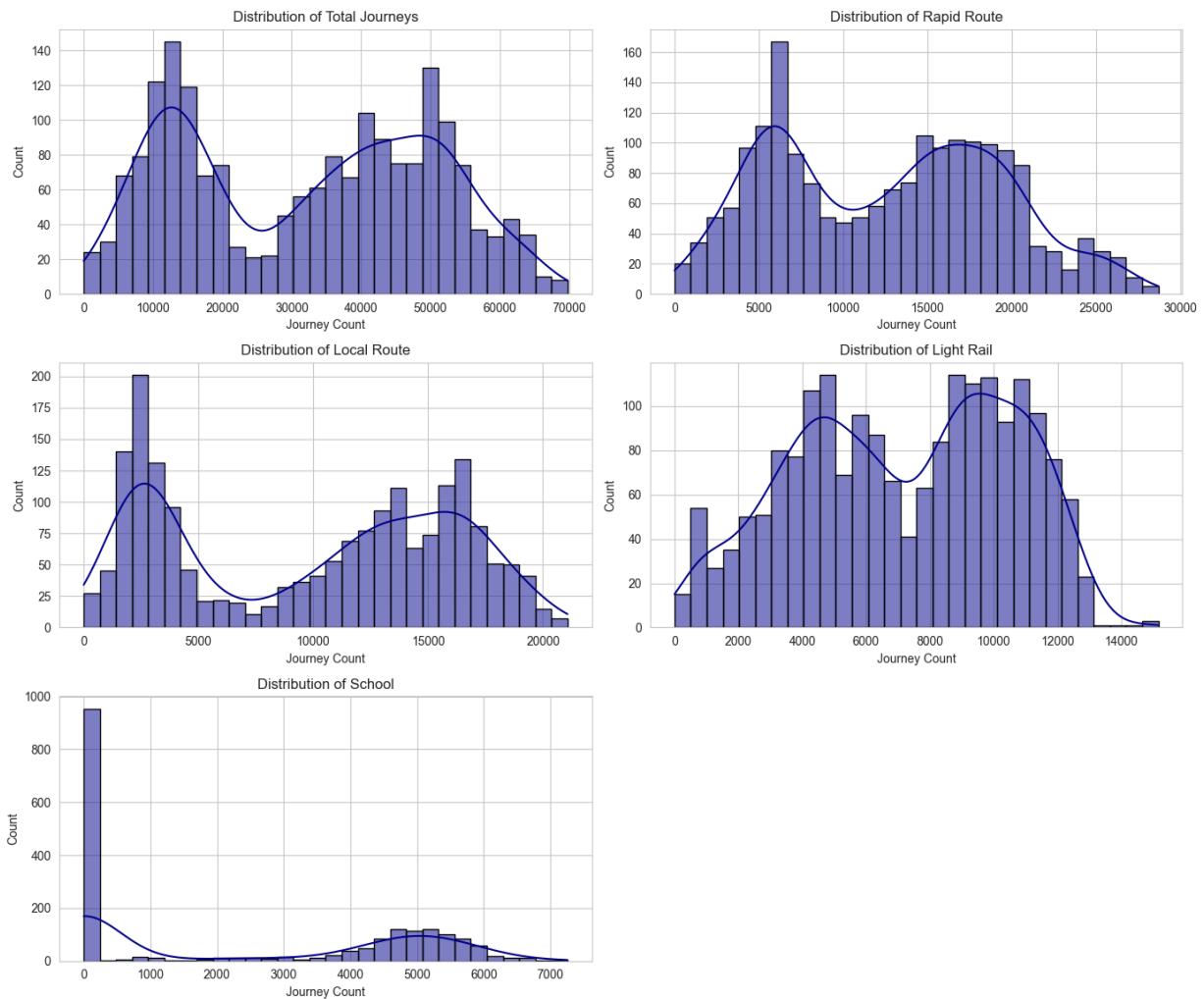


Figure .4

Data validation:

--- Operational Strategy Quantification ---

2. Weekend Optimization Data

Average Weekday Journeys: 40,006

Average Weekend Journeys: 12,911

Ridership Drop (Basis for Schedule Cuts): 67.7%

3. Peak Period & Trough Data

Peak Staffing Data (Highest Usage for Staffing/Capacity)

Busiest Day of Week: **Wednesday** (Avg. Journeys: 41,836)

Busiest Month: **February** (Avg. Daily Journeys: 41,692)

Target Marketing Data (Lowest Usage for Promotions)

Quietest Day of Week: **Sunday** (Avg. Journeys: 10,891)

Quietest Month: **January** (Avg. Daily Journeys: 23,609)

DATA FORECASTING:

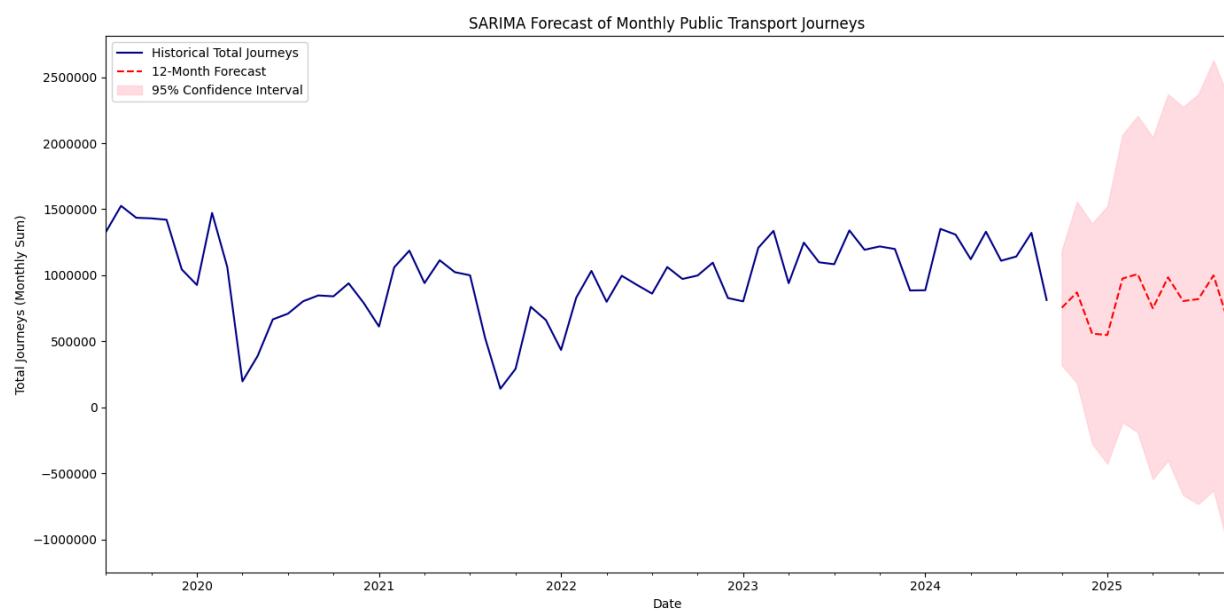


Figure. 5

PREDICTED NEXT 7 DAYS:

--- 7-Day Forecast (Predicted Journeys) ---								
	Date	DayOfWeek	Local Route	Light Rail	Peak Service	Rapid Route	School	Other
2024-09-30		Monday	29	990	0	17	7	0
2024-10-01		Tuesday	13	-363	0	-19	2	0
2024-10-02		Wednesday	1	-420	1	-27	6	0
2024-10-03		Thursday	-9	-420	0	-35	1	0
2024-10-04		Friday	-11	-420	0	-25	0	0
2024-10-05		Saturday	-15	-420	0	-32	0	0
2024-10-06		Sunday	-15	-420	0	-32	0	0

Figure. 6