

**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

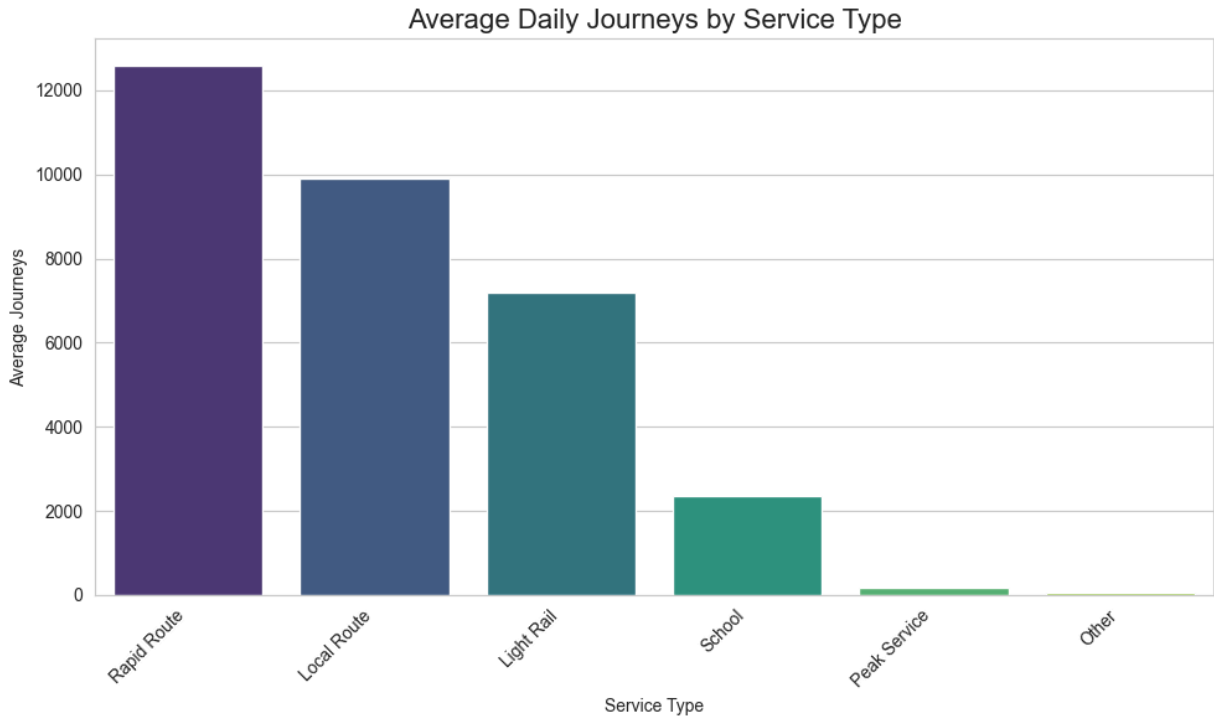


Figure .2

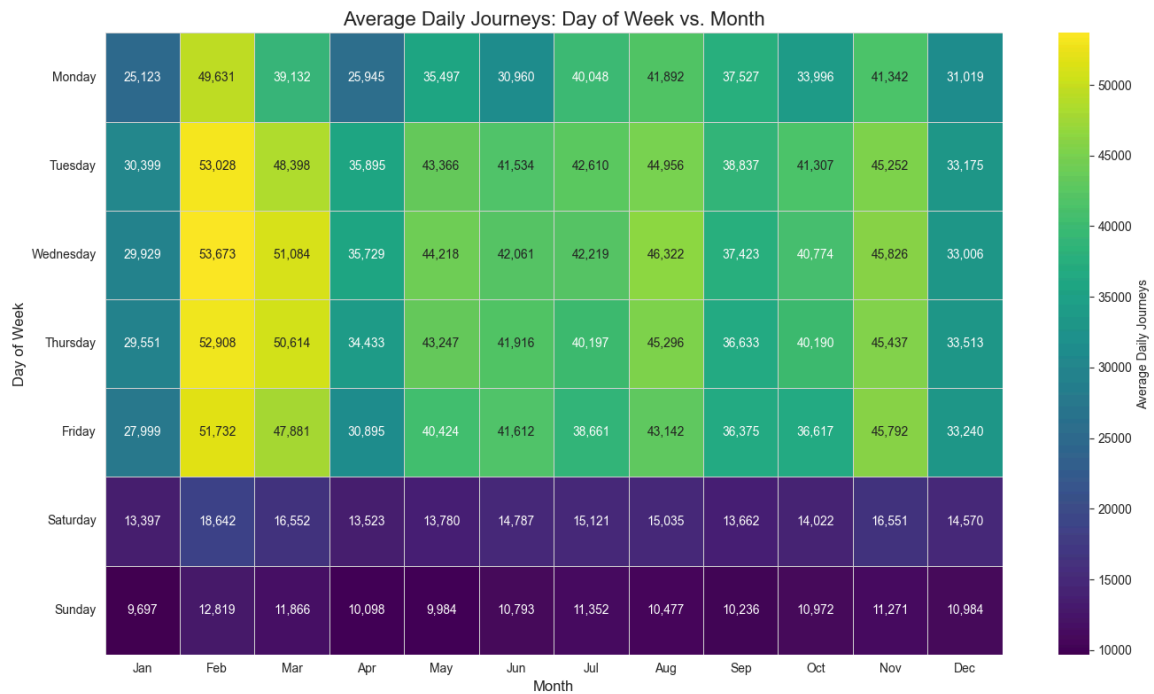


Figure. 3

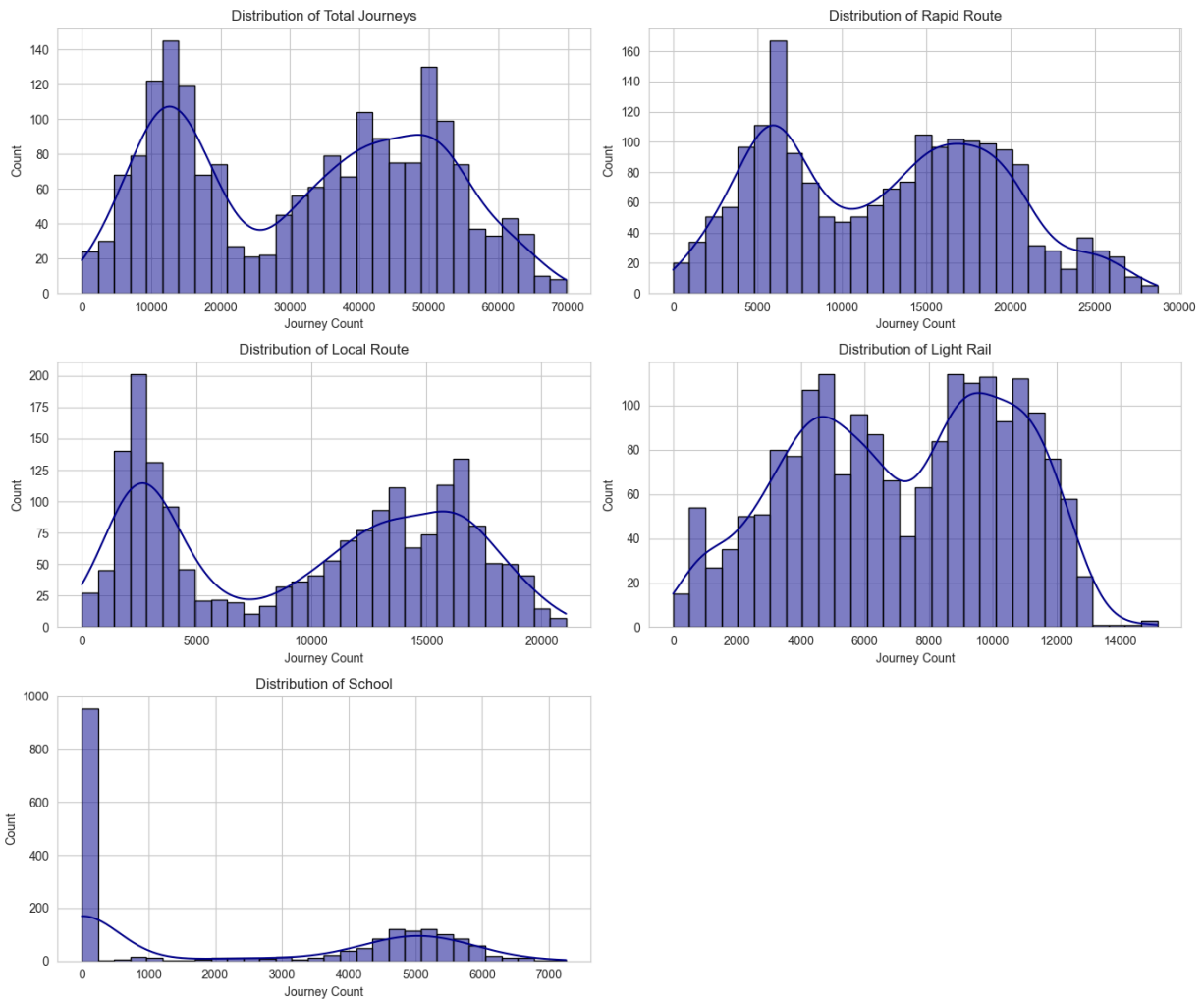


Figure .4

## 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:

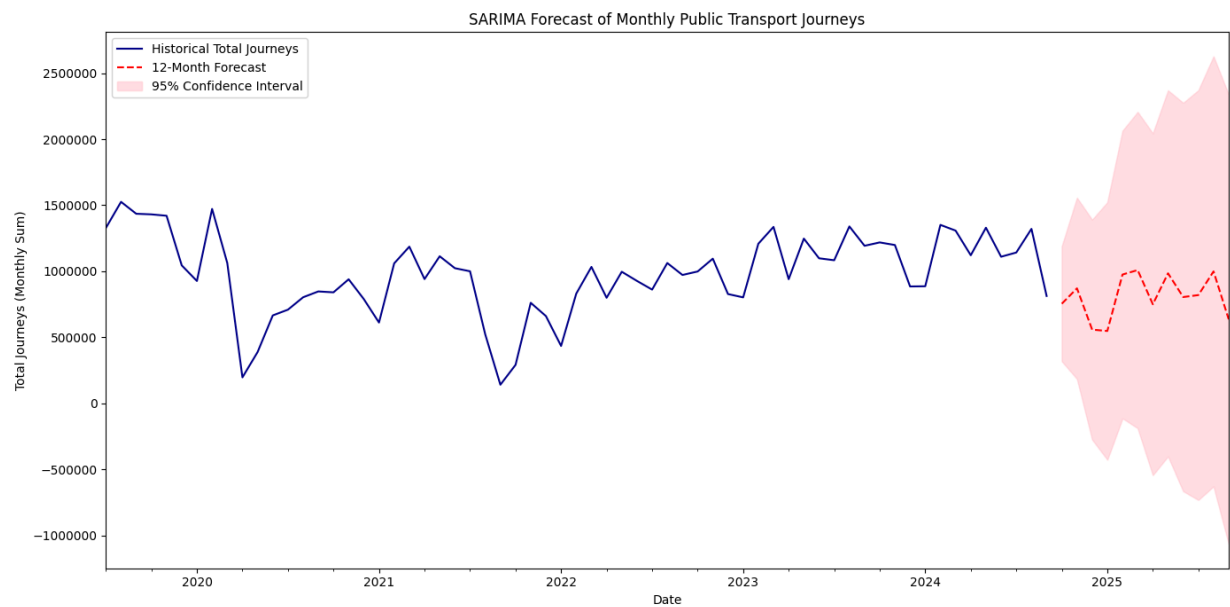


Figure. 5

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