### **Bicycle Rentals**

- Find patterns and differences in usage by member and casual.
- Find total and average ride duration, timing and popular stations.
- should support to create business strategy, optimize operations, improve user engagement.

### 1. Usage Patterns: Members vs Casual Riders

These help identify behavioural differences between user types:

- 1. What is the average ride length for member's vs casual riders?
- 2. How many rides were taken by each user type per day of the week?
- 3. What is the distribution of rideable types per user type?
- 4. Do members ride more frequently in a month than casuals?

## 2. Ride Duration & Timing

Understand ride times and operational load:

- 1. What is the total and average ride duration?
- 2. What are the peak days of the week for riding (overall and per user type)?
- 3. What time of day do most rides start? (Hourly trend)

### 3. Popular Stations and Routes

Reveal usage hotspots:

- 1. Top 10 most popular start stations:
- 2. Top 10 most popular end stations by casual vs member:
- 3. Most common routes taken (start to end station):

# 4. Business Strategy & Optimization Insights

Use data to make strategic decisions:

- 1. Which user type has longer average ride durations?
- 2. Identify underused stations for potential closure or promotion:
- 3. Which stations have the most one-way drop-offs (not starting again)?
- 4. Which days have the highest average ride duration?