

PROJECT : COMMUNICATE WITH YOUR DATA

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INTRODUCTION

Dataset overview

- The dataset comes from the Ford GoBike System (February 2019).
- It contains bike-sharing trip data, including:
 - Trip Duration (in seconds)
 - Start & End Stations
 - User Type (Subscriber or Customer)
 - Rider Age & Gender
 - Bike ID & Rental Details

PURPOSE OF ANALYSIS

1.

- Understand user behavior patterns in bike-sharing.

2.

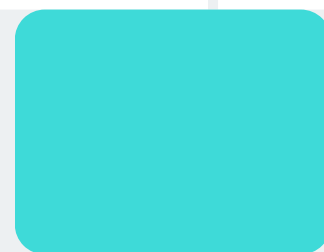
- Explore ride duration variations across age groups.

3.

- Identify correlations between user demographics and ride characteristics.

4.

- Present data-driven insights to optimize the bike-sharing experience.



KEY QUESTIONS & OBJECTIVES (WHAT YOU AIMED TO FIND)

- **Key Questions**

- **How does ride duration distribution change across different age brackets?**
- **What is the most rented month for bike usage?**
- **How do ride durations vary by user type (Subscriber vs. Customer)?**
- **What are the most popular hours for bike rentals?**
- **How is gender distribution represented among riders?**

- **Purpose of Analysis**

- **Understanding user behavior and ride patterns**
- **Identifying key trends in bike rentals**

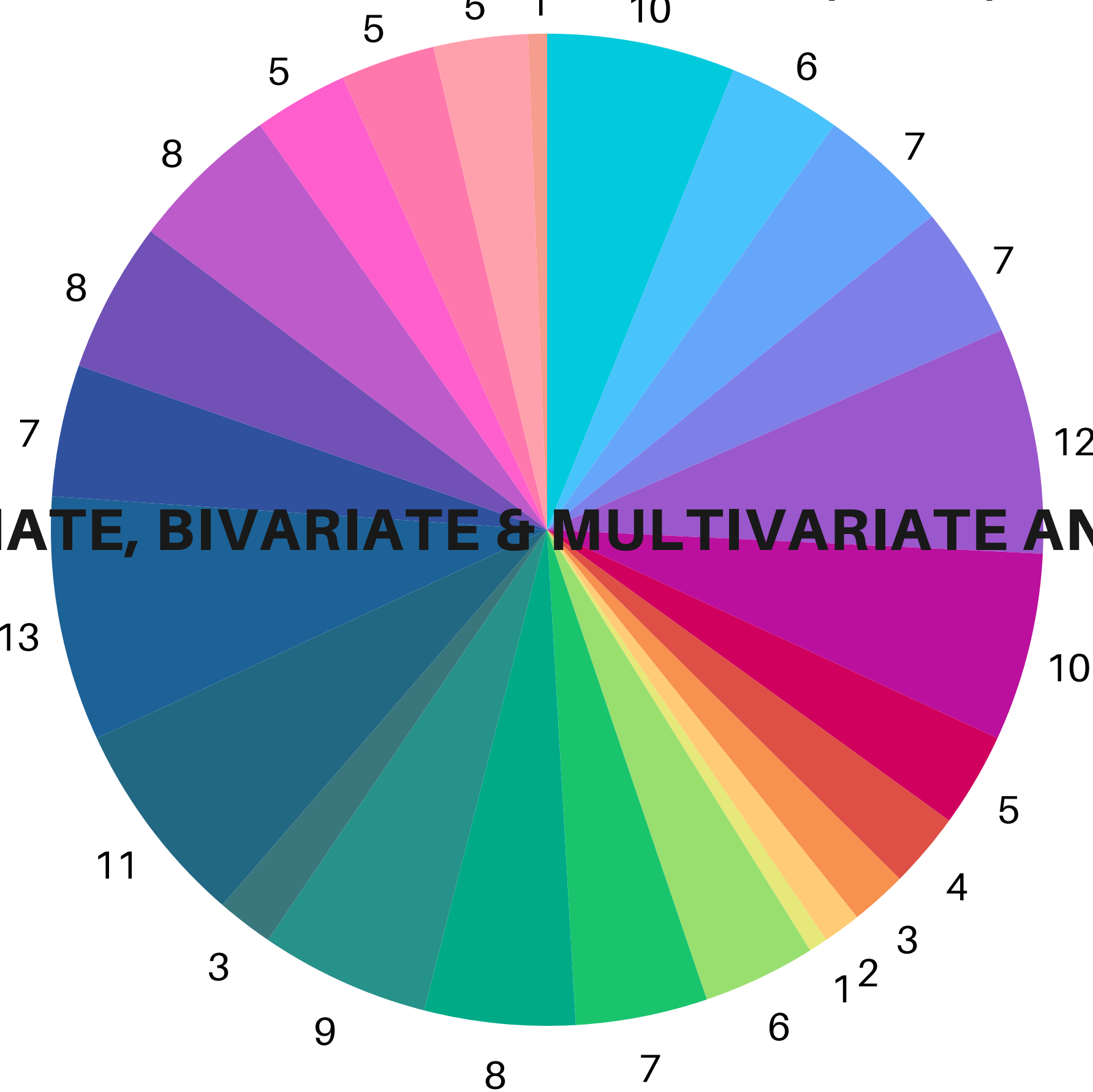
DATA CLEANING & PREPROCESSING

- **Steps taken:**
 - **Handling :**
 - **Missing values**
 - **Outliers,**
- **Data formatting**

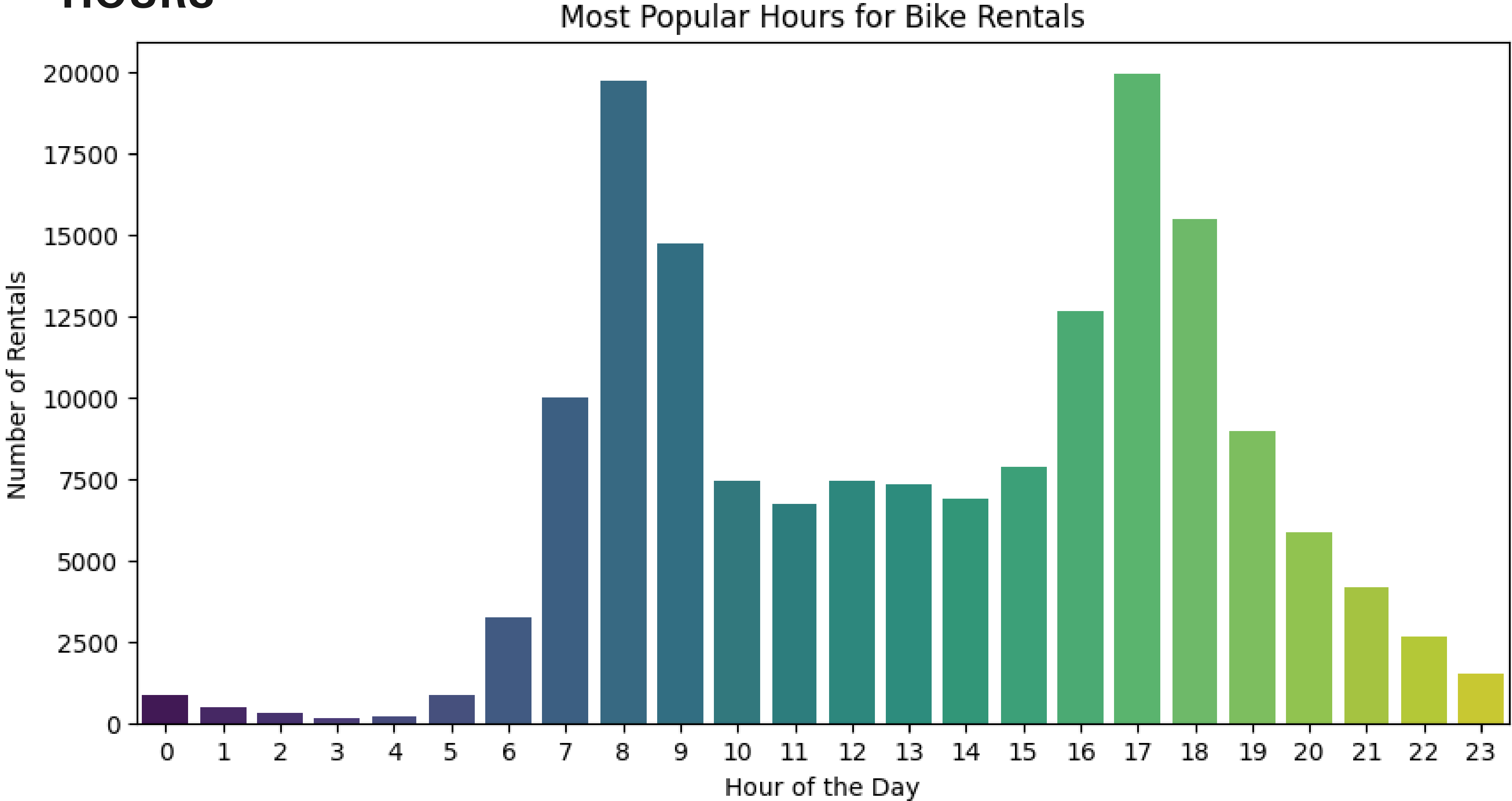


EXPLORATORY DATA ANALYSIS (EDA) OVERVIEW

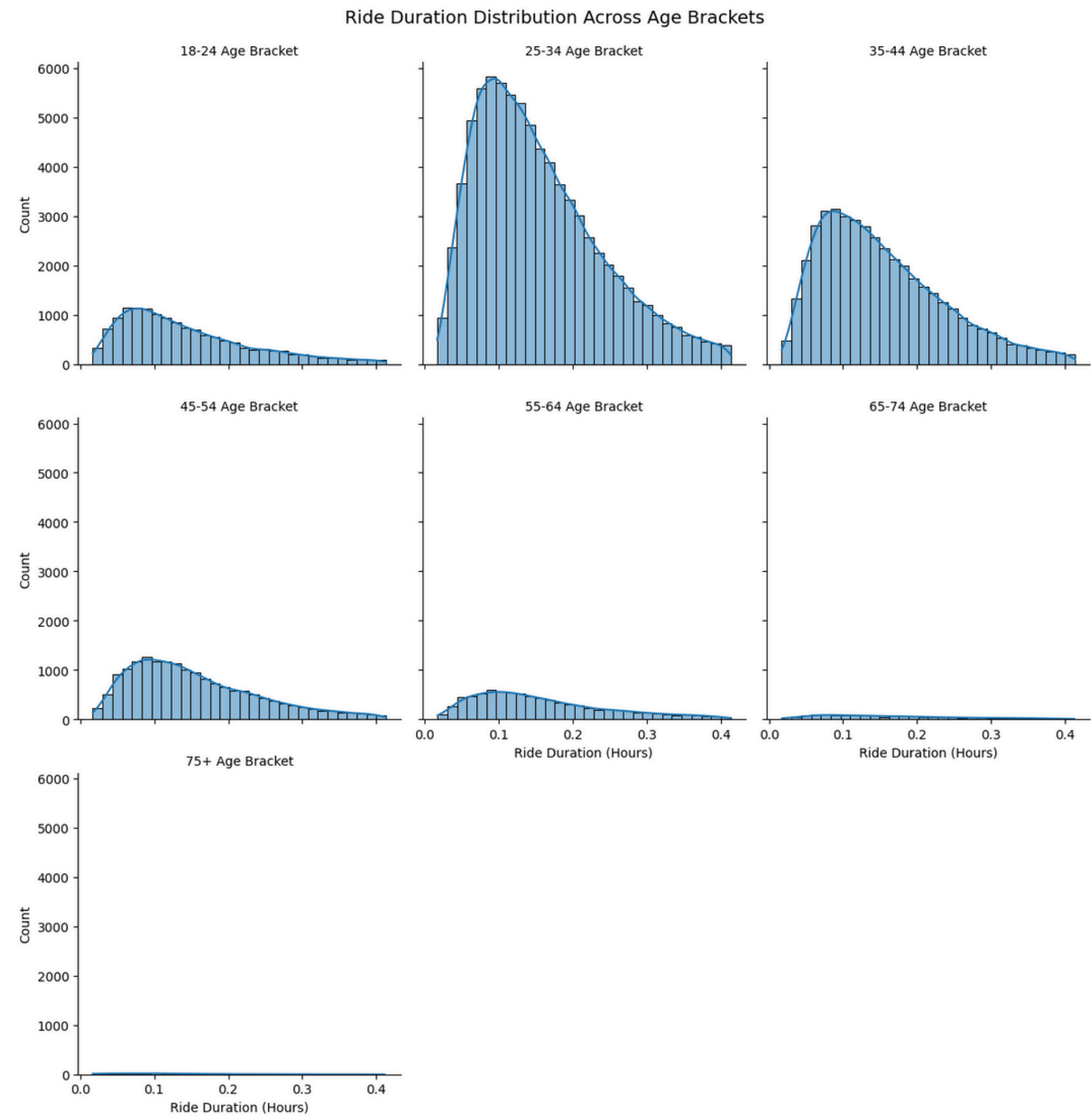
UNIVARIATE, BIVARIATE & MULTIVARIATE ANALYSES

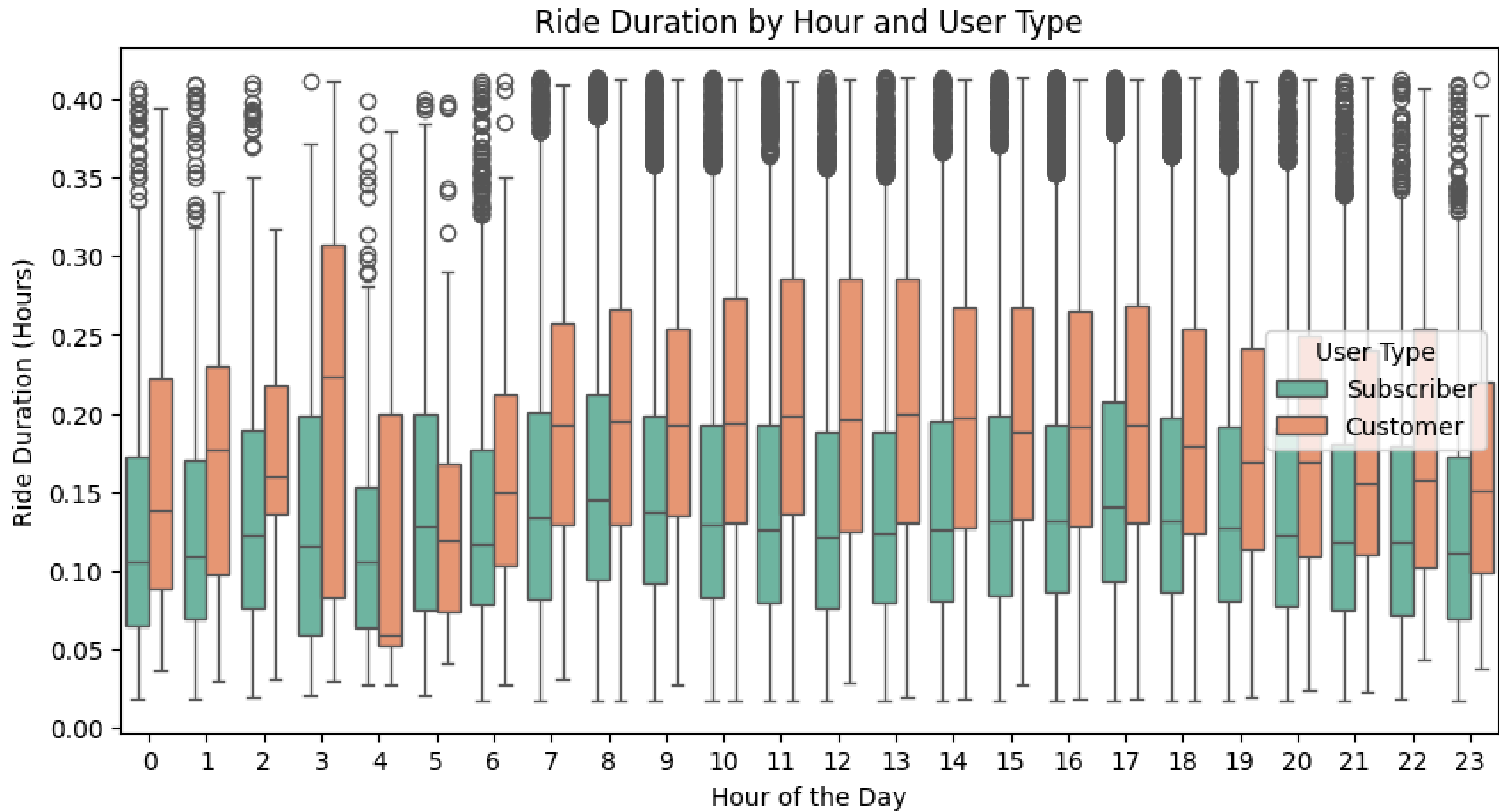


- **UNIVARIATE ANALYSIS: BAR CHART OF MOST POPULAR RENTAL HOURS**



BIVARIATE ANALYSIS: BOXPLOT: RIDE DURATION VS. AGE BRACKETS





Facet Grid: Ride Duration vs. Age & User Type

Multivariate Analysis

Key Findings & Insights

- Peak usage times and age group trends
 - “Peak hour is 5 PM with 17500+ rentals”).
- Subscriber vs. Customer ride behavior
 - That is clear in the day parts
- Gender-based differences in ride patterns
 - Males ride bikes by 75%!

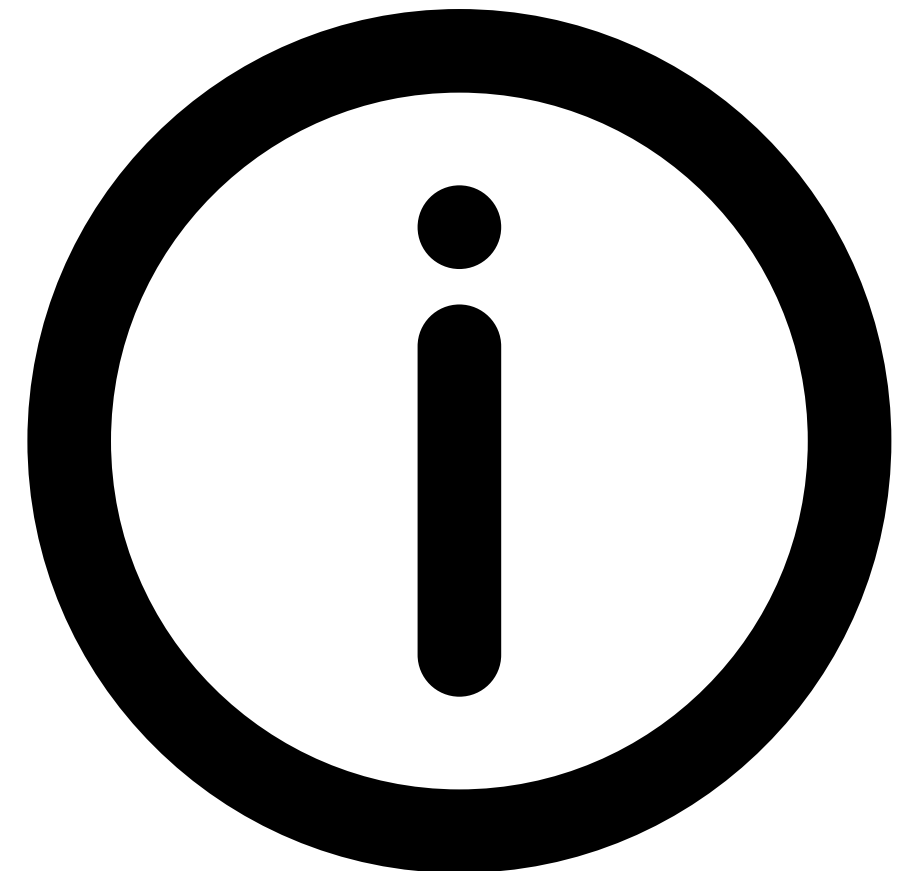
Challenges & Limitations

- **Outliers in ride duration**
- **Data gaps & missing values**



CONCLUSION & RECOMMENDATIONS

- **Key takeaways from the data analysis**
 - **Suggestions for improving service**
 - **(adjusting bike availability in high-demand areas,**
 - **promoting usage during off-peak hours)**



Thank You!



FINISH