



Title Page



← → 🔍 RevoU - Full Stack Data Analytics - May 2022

Uber User Behavioral Analysis

Group 0 - Team 5 - Barcelona





Title Page

Proprietors



← → 🔍 Team Members

Meet our Teams!



Cessa

Project Manager



Ilham

Data Analyst



Iqbal

Data Analyst



Riska

Viz & Presentation



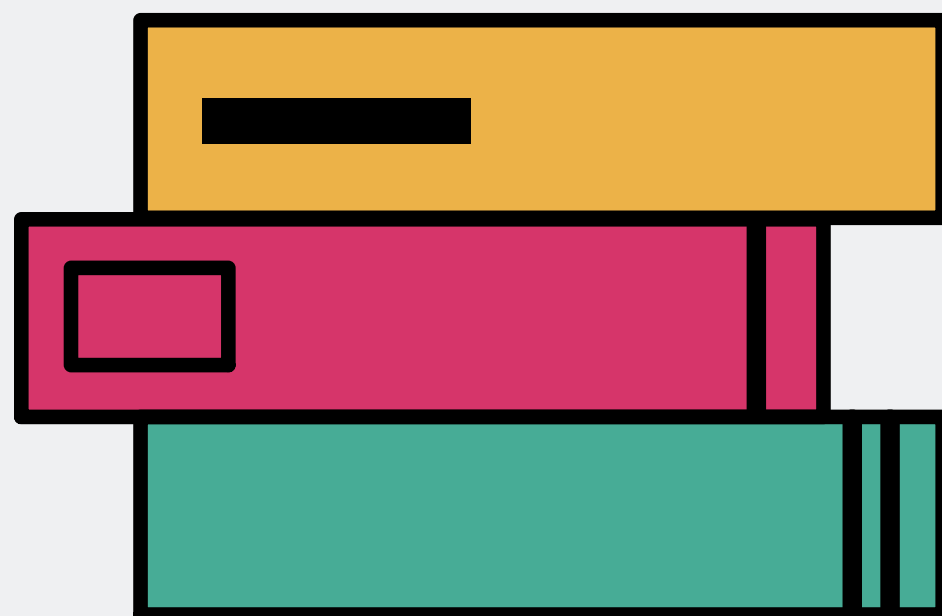
Title Page

Proprietors

Introduction



Table of Content



I. Introduction

II. Project Goals

II. Methodology

IV. Analysis - Result

V. Recommendation - Expected Output



About Uber

Uber Inc. is a transportation company with an app that allows passengers to hail a ride and drivers to charge fares and get paid.

The company was founded in 2009 and is headquartered in San Francisco.





Title Page

Proprietors

Introduction



← → ↺ 🔍 Data Overview

Dataset

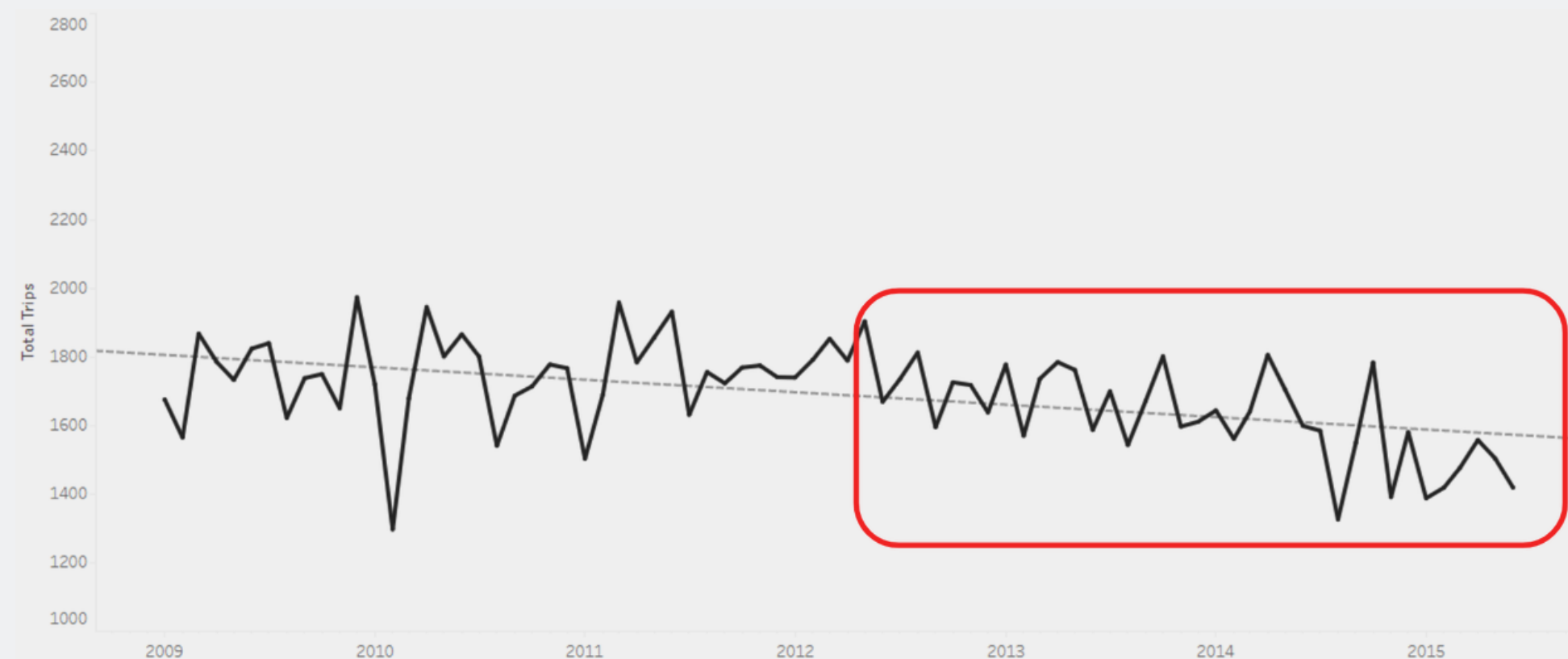
The Dataset used is Uber Inc Order's data in New York City from January 2009 to June 2015.

Data Features consist of order id, fare of each trip, pickup datetime, passenger count, and coordinates of pickup and drop off location.





We found that..



Orders are having **down** trend!

As seen on the chart beside, from 2012 the number of orders is decreasing.

It is suspected that the decrease in orders occurred due to the emergence of a new competitor (Lyft) that was founded in Mid 2012.

So, this Analysis is created to suggest recommendation to increase orders.



Title Page

Proprietors

Introduction

Project Goals



← → 🔍 Executive Summary

To increase orders, Categorized Cluster are..



Group of 9-to-5 Workers

Promotion within 1 hour at 8 AM and 7 PM Weekdays for UberX.



Group of Long-Night Owl

Promotion for Trips more than 5 KM after 10 PM - 12 AM for UberX.



Group of Leisure Traveller

Promotion at 12 - 7 PM Weekend to and from Tourist Attractions for UberX.



Title Page

Proprietors

Introduction

Project Goals



← → Q Q Problem Statement



How to increase Uber's order growth by 3% within a year from 2014?

The First Question is :

Why many customer **don't order** from **Uber**?



Title Page

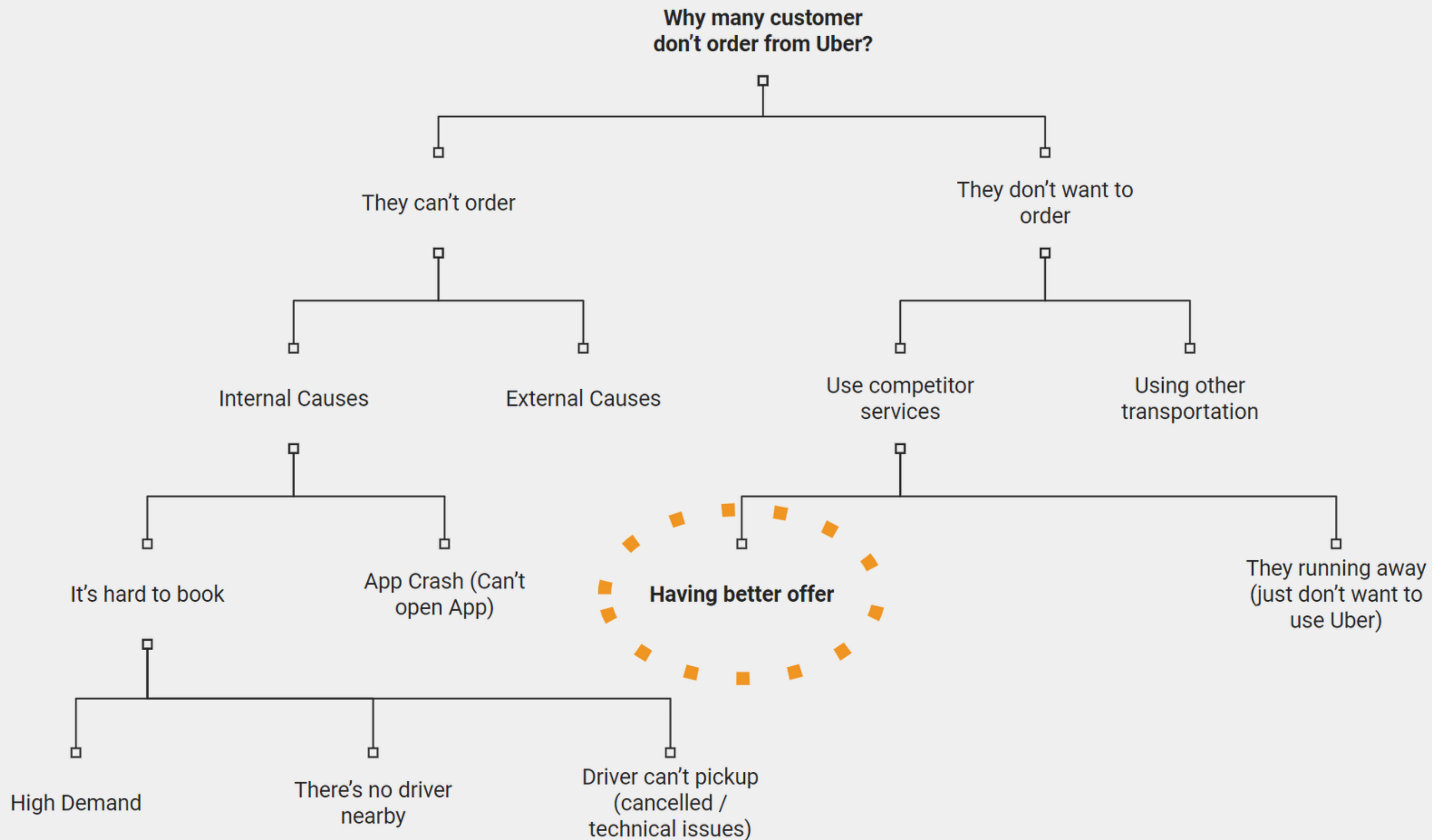
Proprietors

Introduction

Project Goals



← → ↺ 🔍 Root Cause Analysis





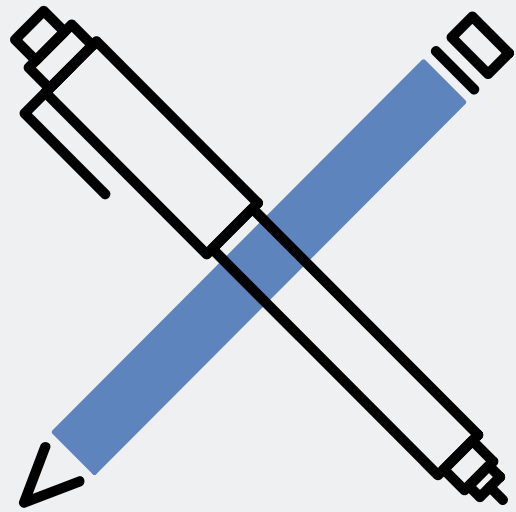
Title Page

Proprietors

Introduction

Project Goals

Methodology



Methodology

Data Preparation & Cleaning

Data Preparation, Outlier and Null Cleaning are fully done with Python (Google Colaboratory)

Data Analysis & Visualization

User's Behavior Segmentation done with Python and Visualize in Tableau

Recommendation & Expected Outcome

Recommendation actions and Expected outcome



By Cluster Analysis,

Users are distinguished as :

Cluster 0 : Trip in the **weekdays** afternoon

Cluster 1 : Trip in the **weekdays** morning

Cluster 2 : Trip in the **weekend** afternoon

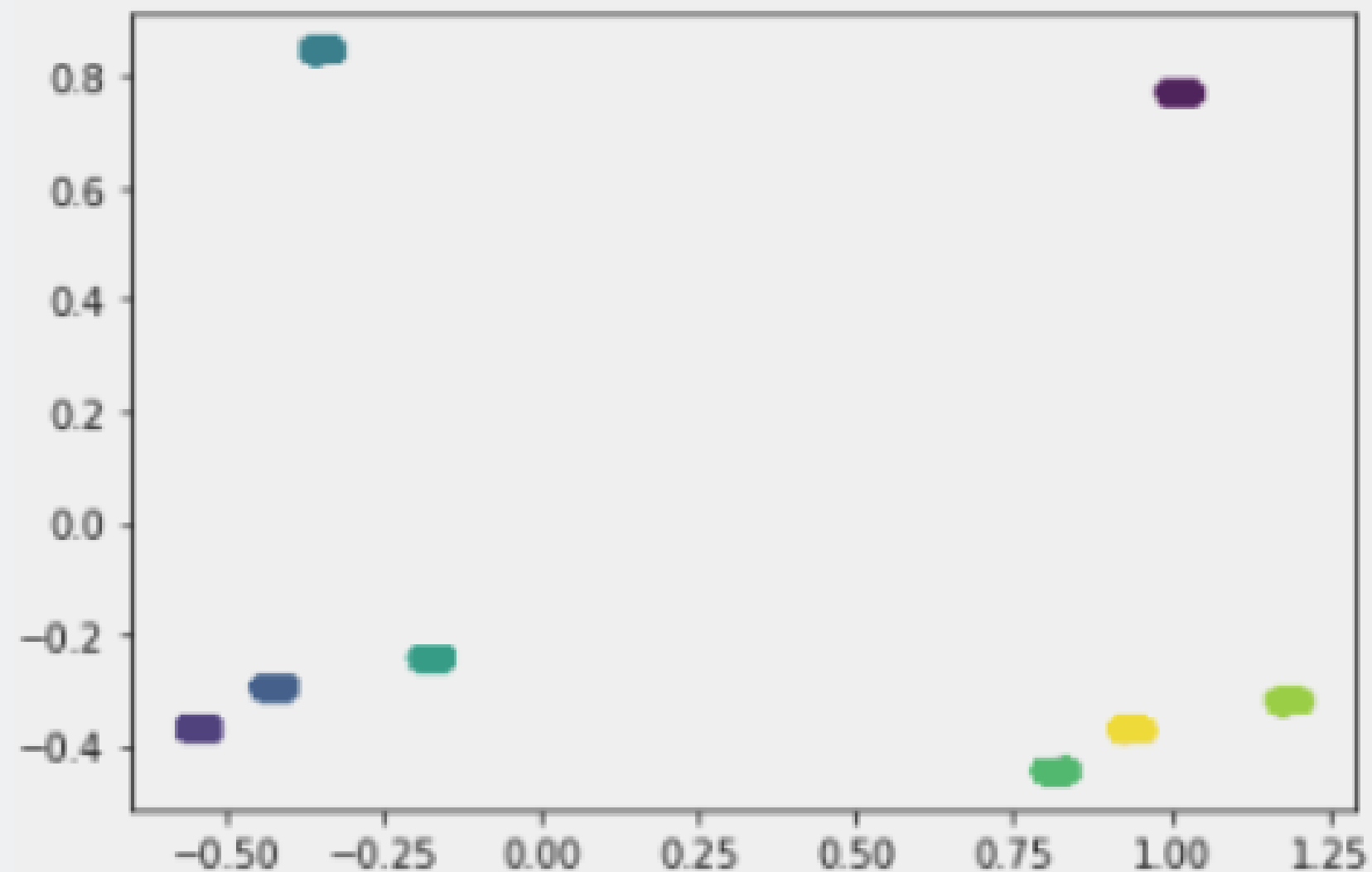
Cluster 3 : Trip in the **weekdays** evening

Cluster 4 : Trip in the **weekend** night

Cluster 5 : Trip in the **weekdays** night

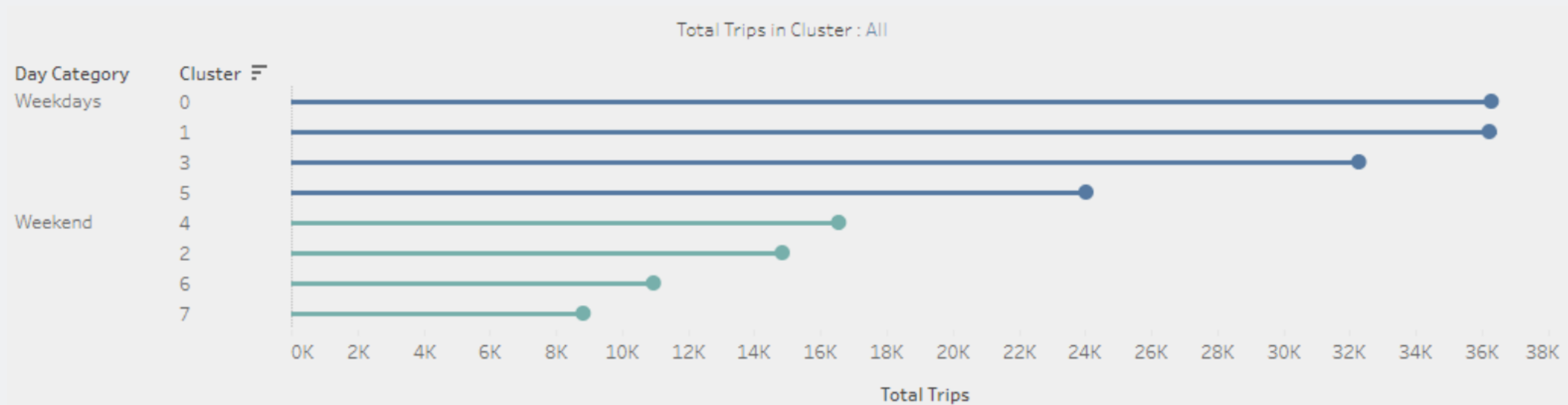
Cluster 6 : Trip in the **weekend** evening

Cluster 7 : Trip in the **weekend** morning





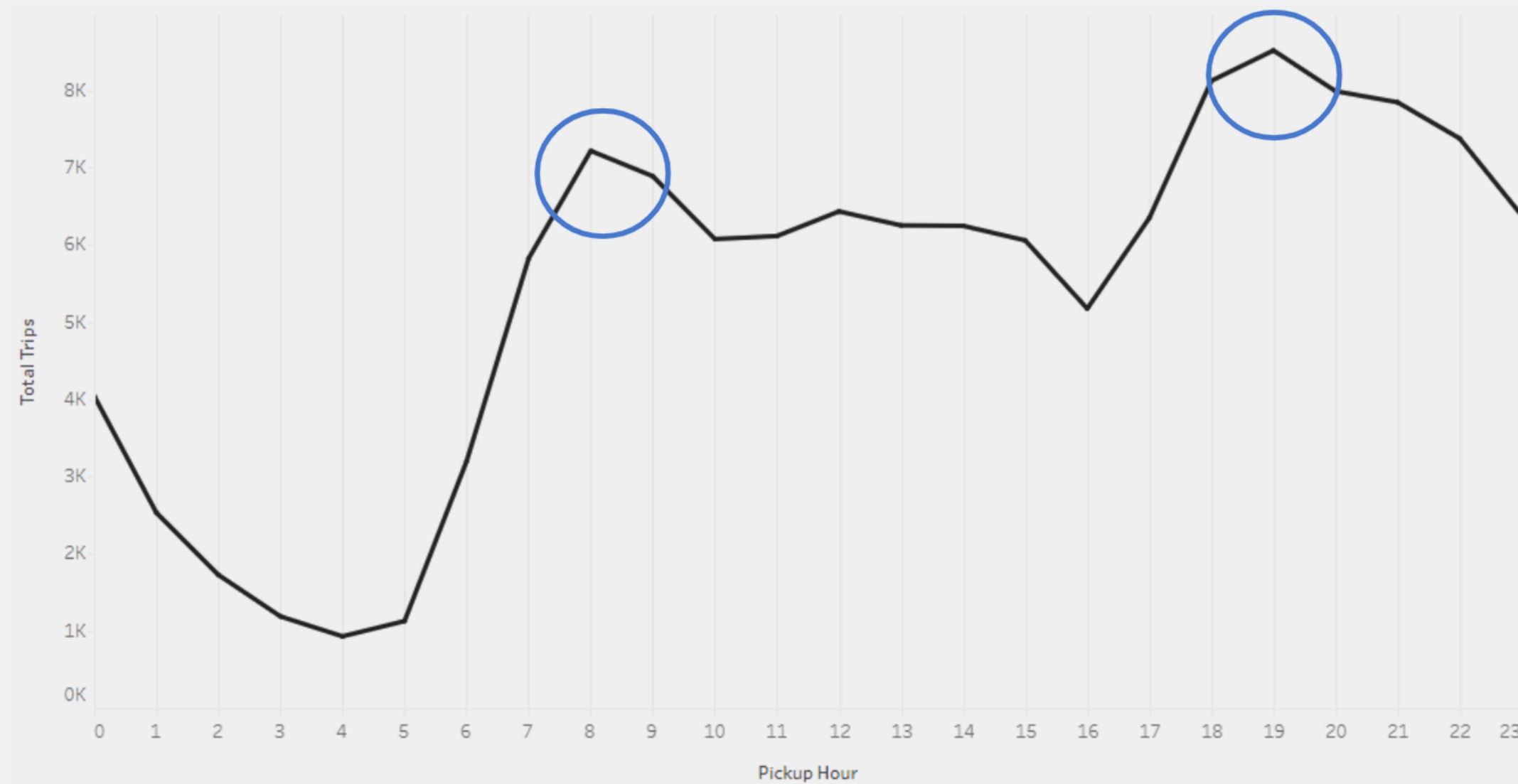
Trips dominated in weekdays



Each cluster shows that Uber is dominated by users who like to go trips in **weekdays** (typically as routine activities).



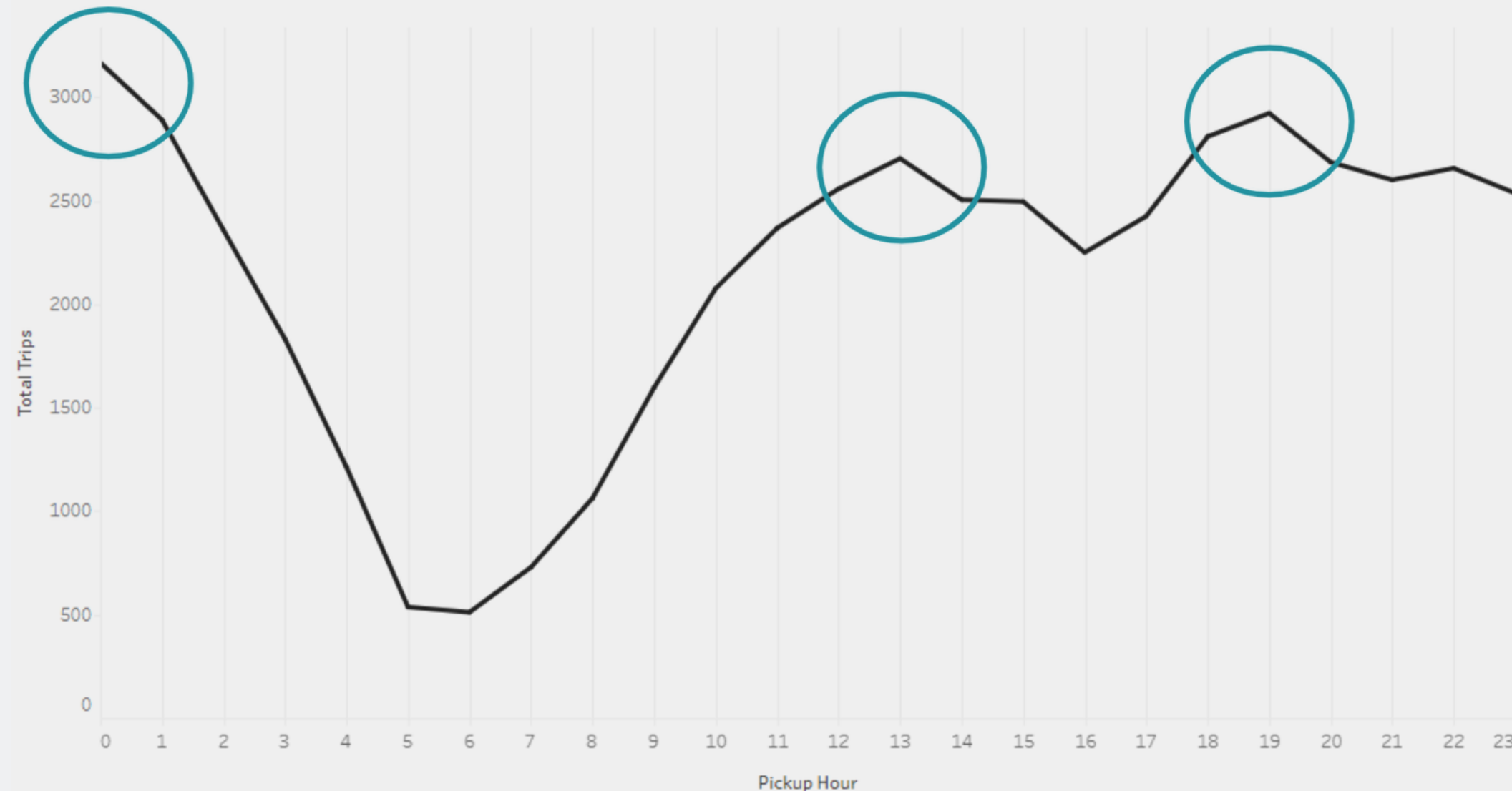
Weekdays Peak Hours are at 8 AM and 7 PM



Peak Hours are included in **Cluster 1** and **Cluster 3** respectively.



Weekend Peak Hours are at 12 AM, 1 PM, and 7 PM



Peak Hours are included in **Cluster 4**, **Cluster 2**, and **Cluster 6** respectively.

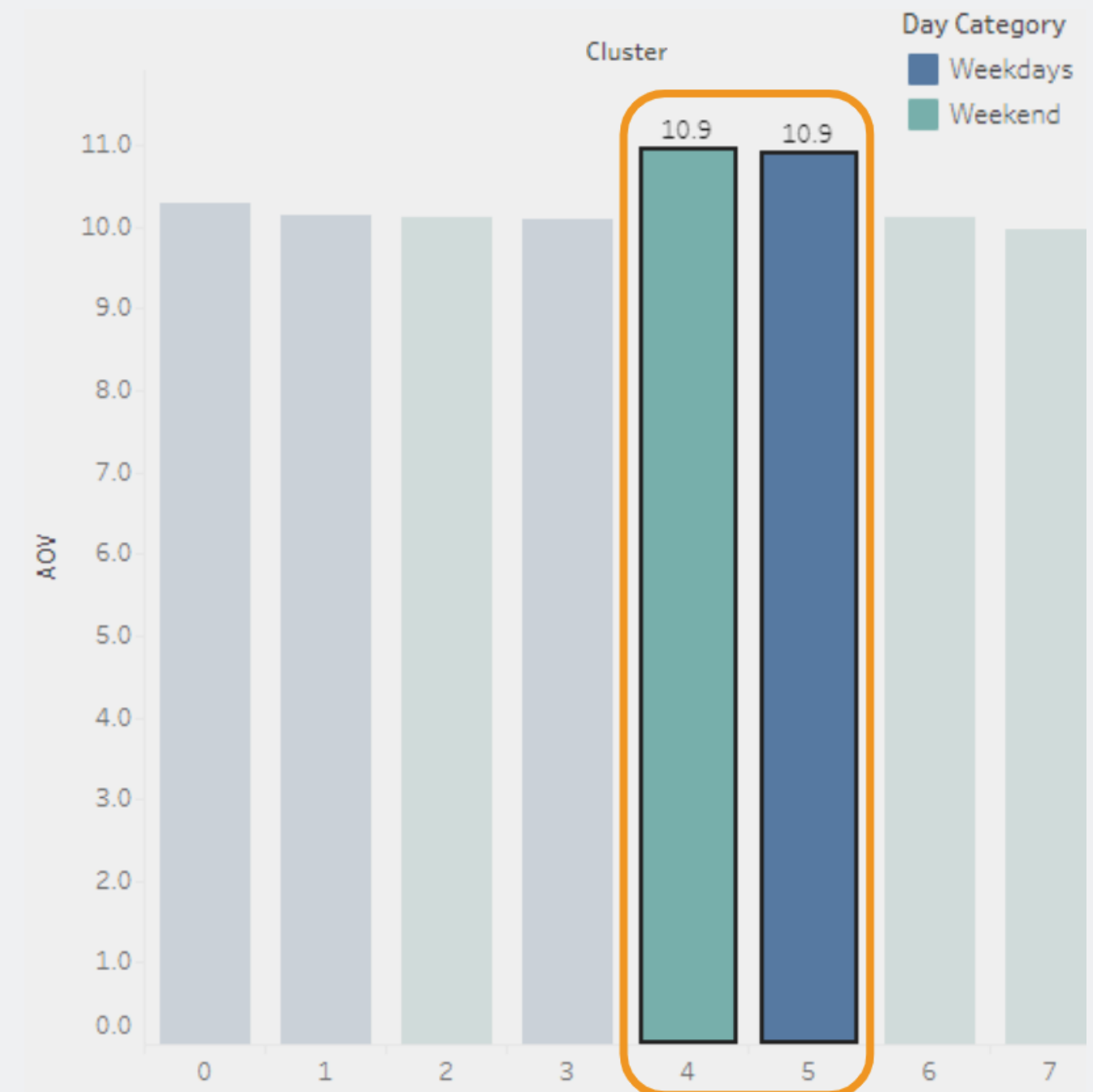
[Title Page](#)[Proprietors](#)[Introduction](#)[Project Goals](#)[Methodology](#)[Results](#)

← → 🔍 Average Order Value for Each Cluster

AOV pretty much same, except..



For **Cluster 4** and **Cluster 5** have slightly higher average trip value (~ USD 11) than other clusters.

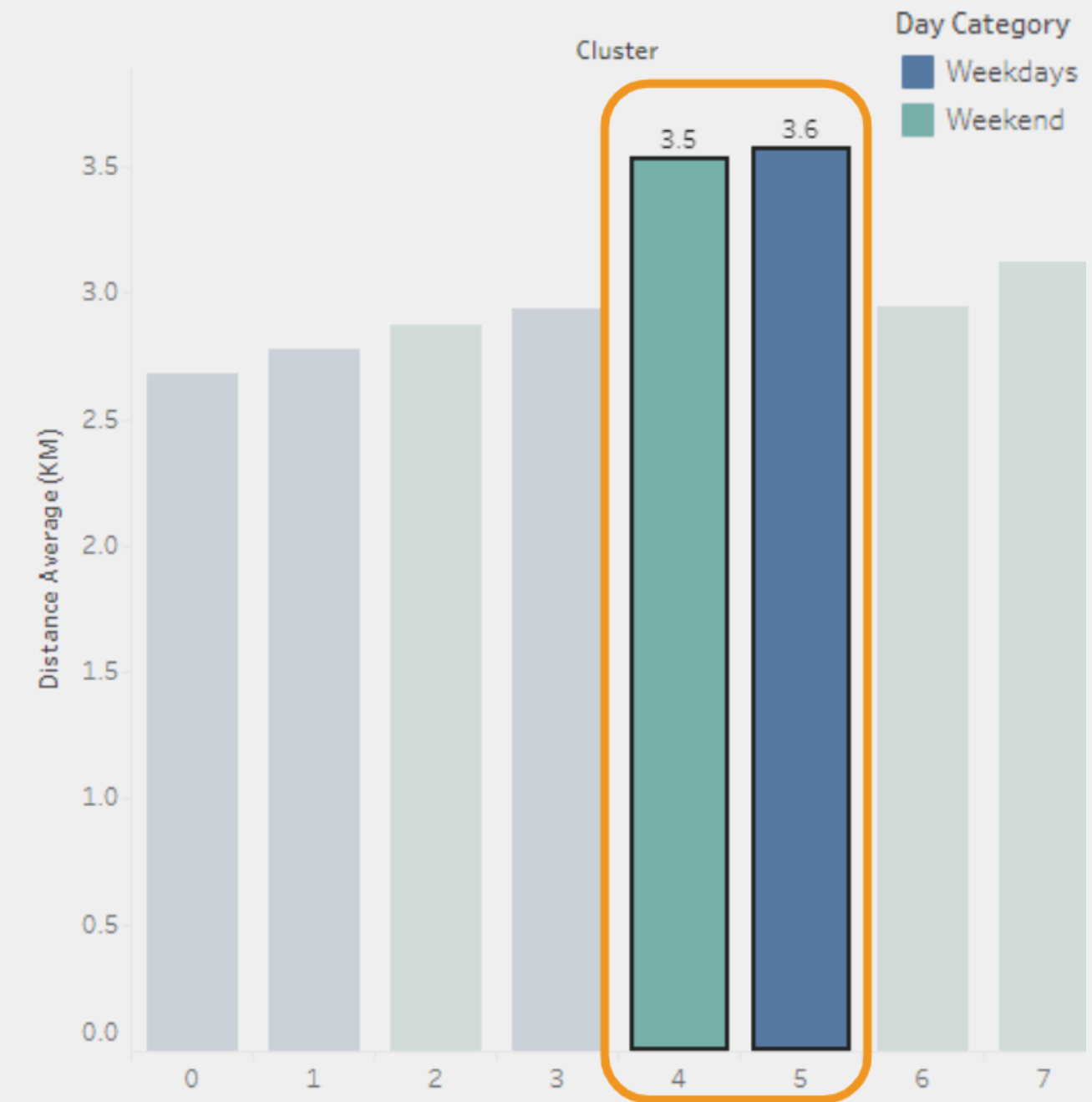




All Avg Distance are < 5 km (Near), but..



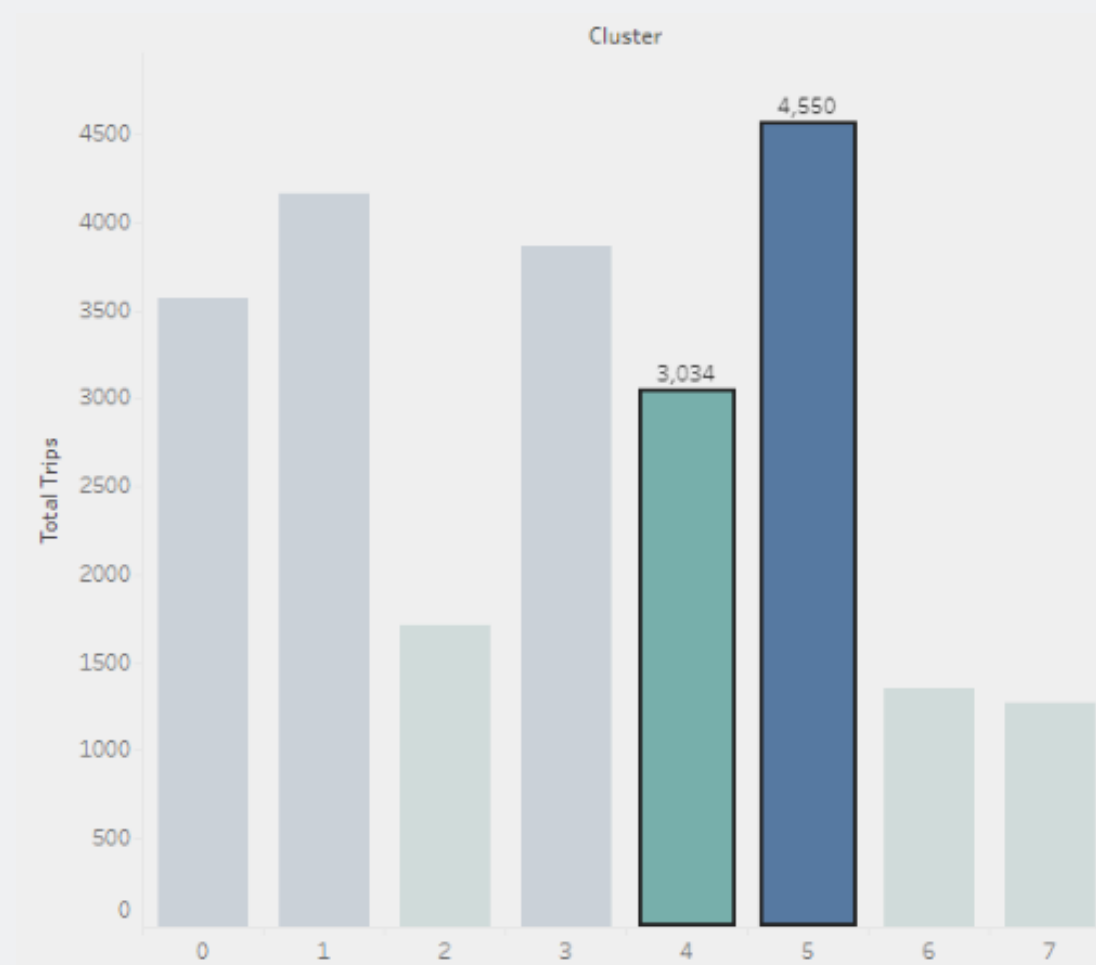
Cluster 4 and **Cluster 5** have slightly higher average trip distance (~ 3,5 km) than the others.



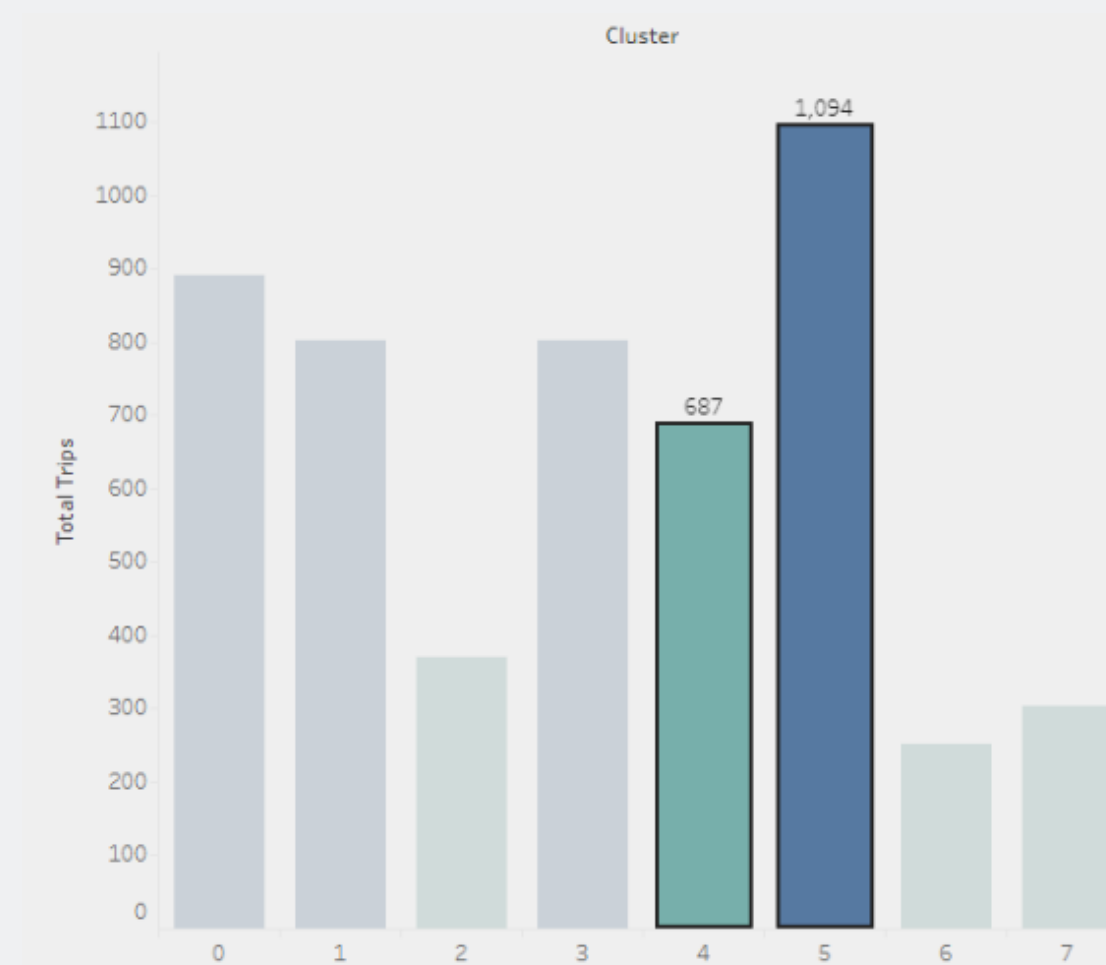
[Title Page](#)[Proprietors](#)[Introduction](#)[Project Goals](#)[Methodology](#)[Results](#)

← → 🔍 Trips by Distance Level for Each Cluster

For > 5 km (Moderate & Far) Trip,



Moderate



Far

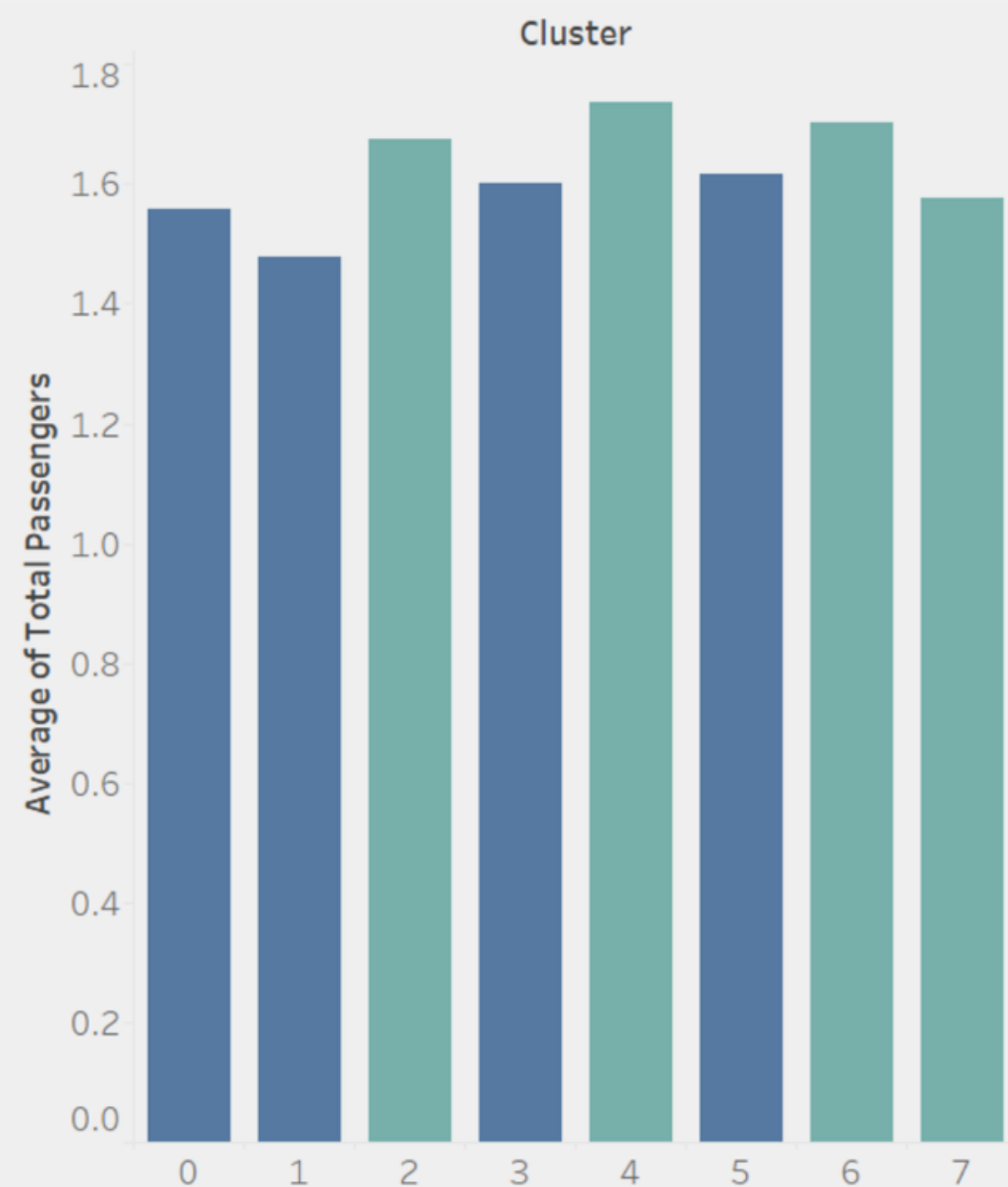


Most Trips are made by user **Cluster 4** (for **weekend**) & **Cluster 5** (for **weekdays**).

[Title Page](#)[Proprietors](#)[Introduction](#)[Project Goals](#)[Methodology](#)[Results](#)

← → 🔍 Q Trips by Passenger for Each Cluster

Avg passenger is 2 people



It is suspected that # passenger is **correlated** with the **type of Uber's car** which user ordered.

[Title Page](#)[Proprietors](#)[Introduction](#)[Project Goals](#)[Methodology](#)[Results](#)

← → 🔍 Cluster Group based on their characteristic

We can group the cluster into,



Group of 9-to-5 Workers

Cluster 1 and Cluster 3 are have Peak Hours on Weekdays.



Group of Long-Night Owl

Cluster 4 and Cluster 5 are have the Most Trips for Moderate & Far at Night.



Group of Leisure Traveller

Cluster 2 and Cluster 6 are have Peak Hours on Weekends.

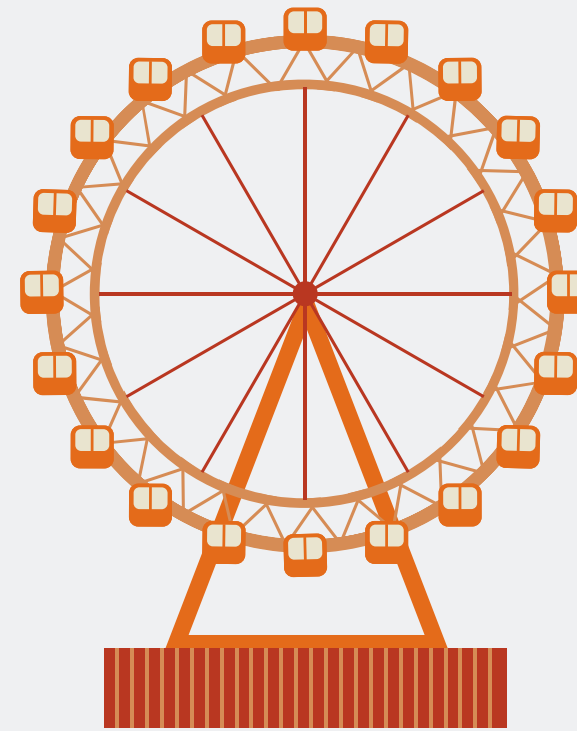


Suggested Campaign



Group of 9-to-5 Workers

Discount 20% up to \$3 within 1 hour at 8 AM & 7 PM Weekdays for UberX.



Group of Leisure Traveller

Discount 20% up to \$3 at 12 - 7 PM Weekends to and from Tourist Attractions for UberX.

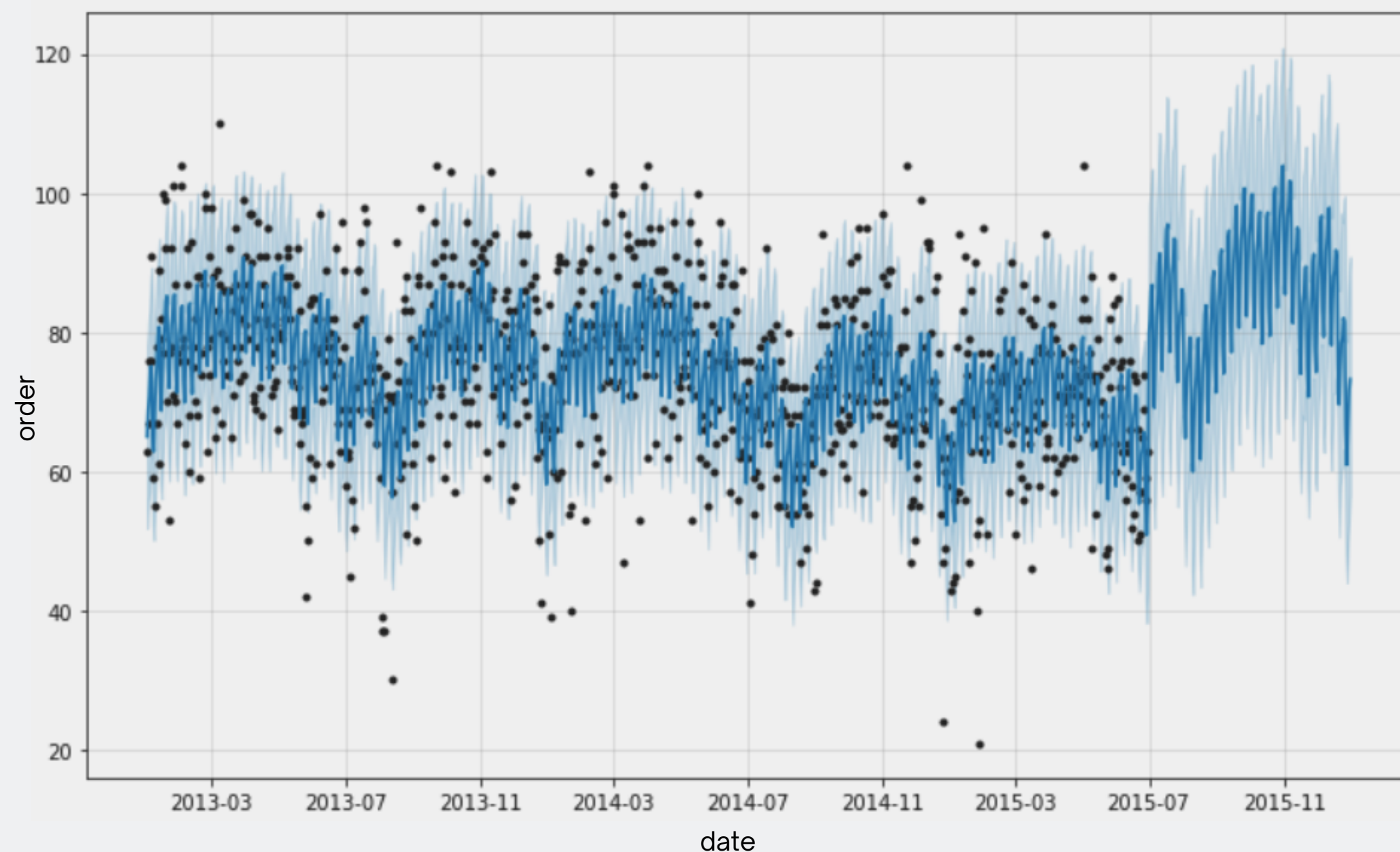


Group of Long-Night Owl

Discount 20% up to \$3 for Trips more than 5 KM after 10 PM - 12 AM for UberX.



By executing Promotions,

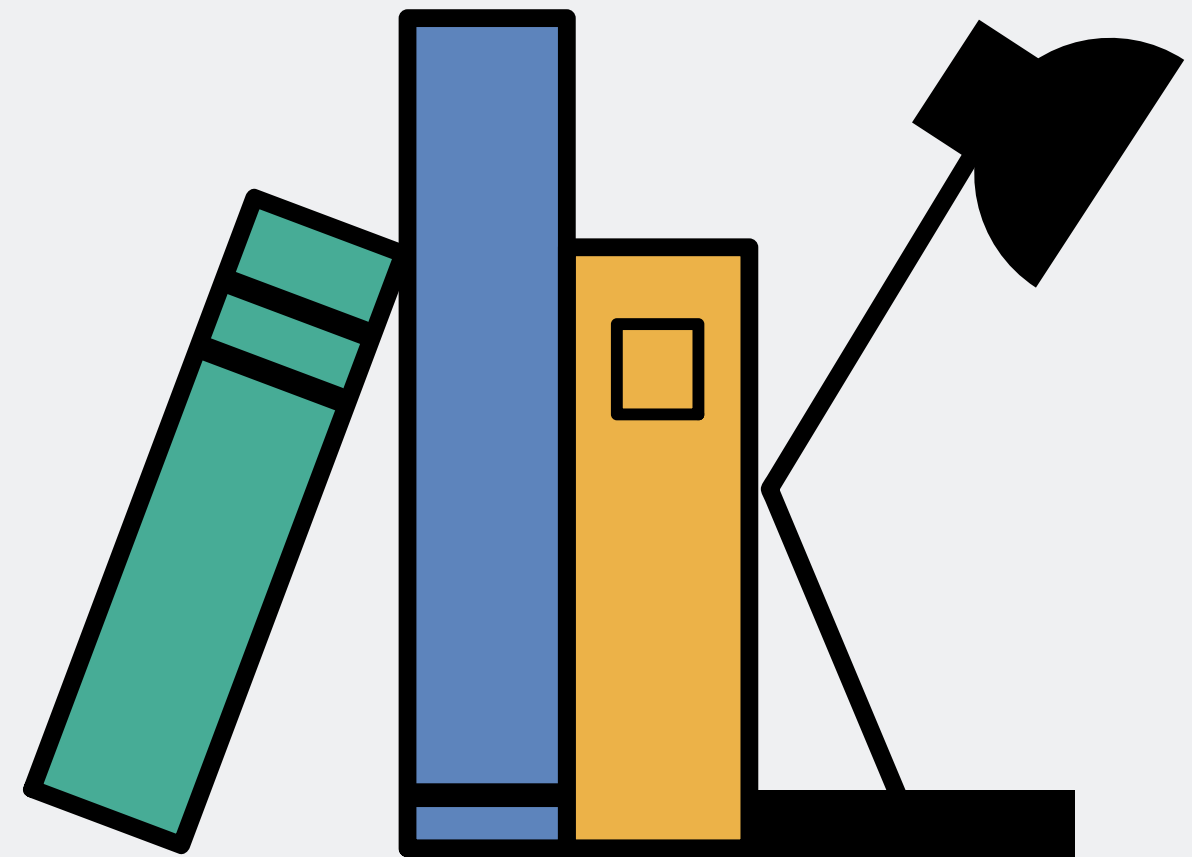


Uber may have a chance to create a **positive annual growth** by **3%** in 2015.



Analysis can be more comprehensive

- 01 Need Revenue and Cost Data to do **Profit Analysis**
- 02 Need User Data for more detail targeted **Customer Segmentation**





Title Page

Proprietors

Introduction

Project Goals

Methodology

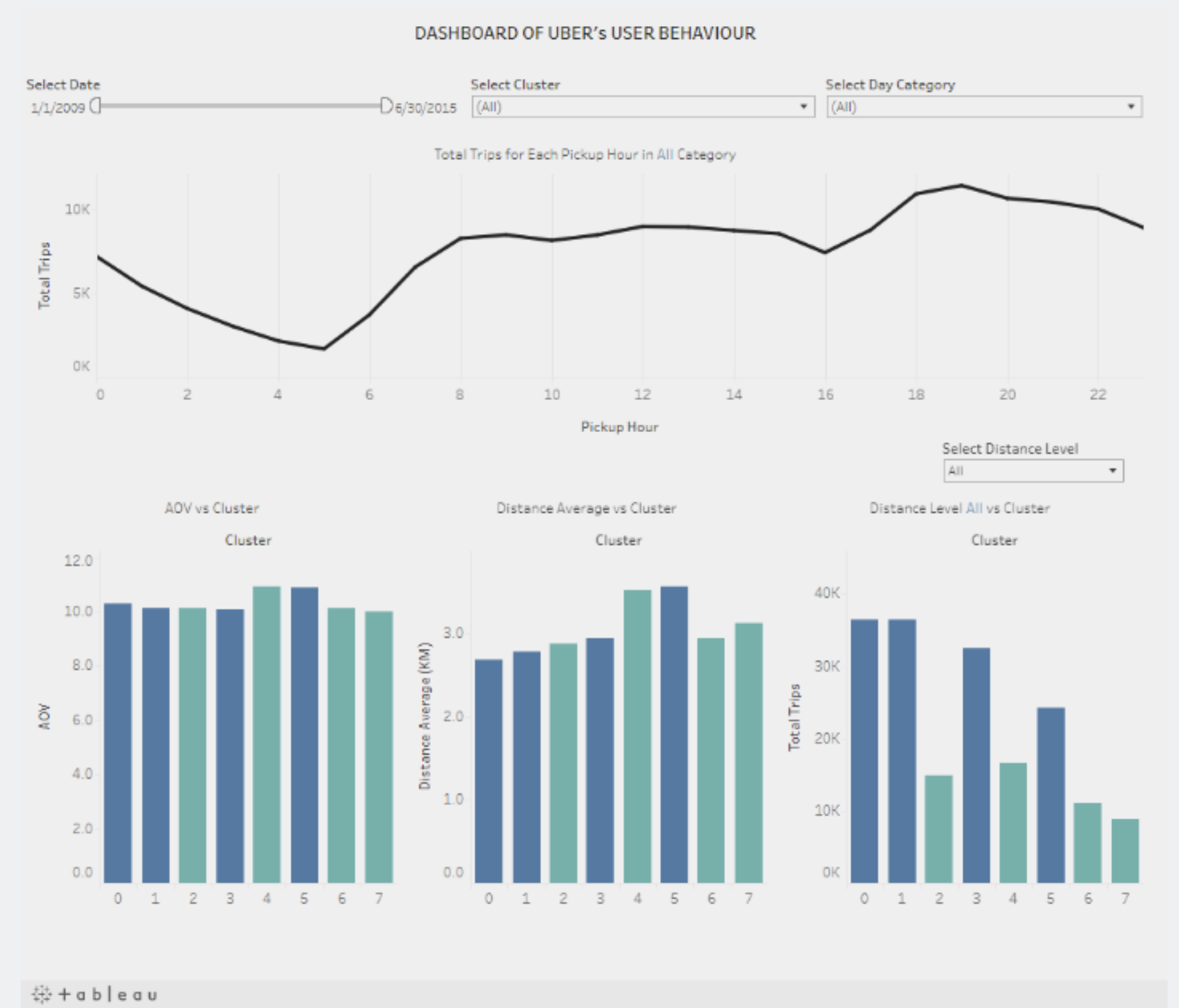
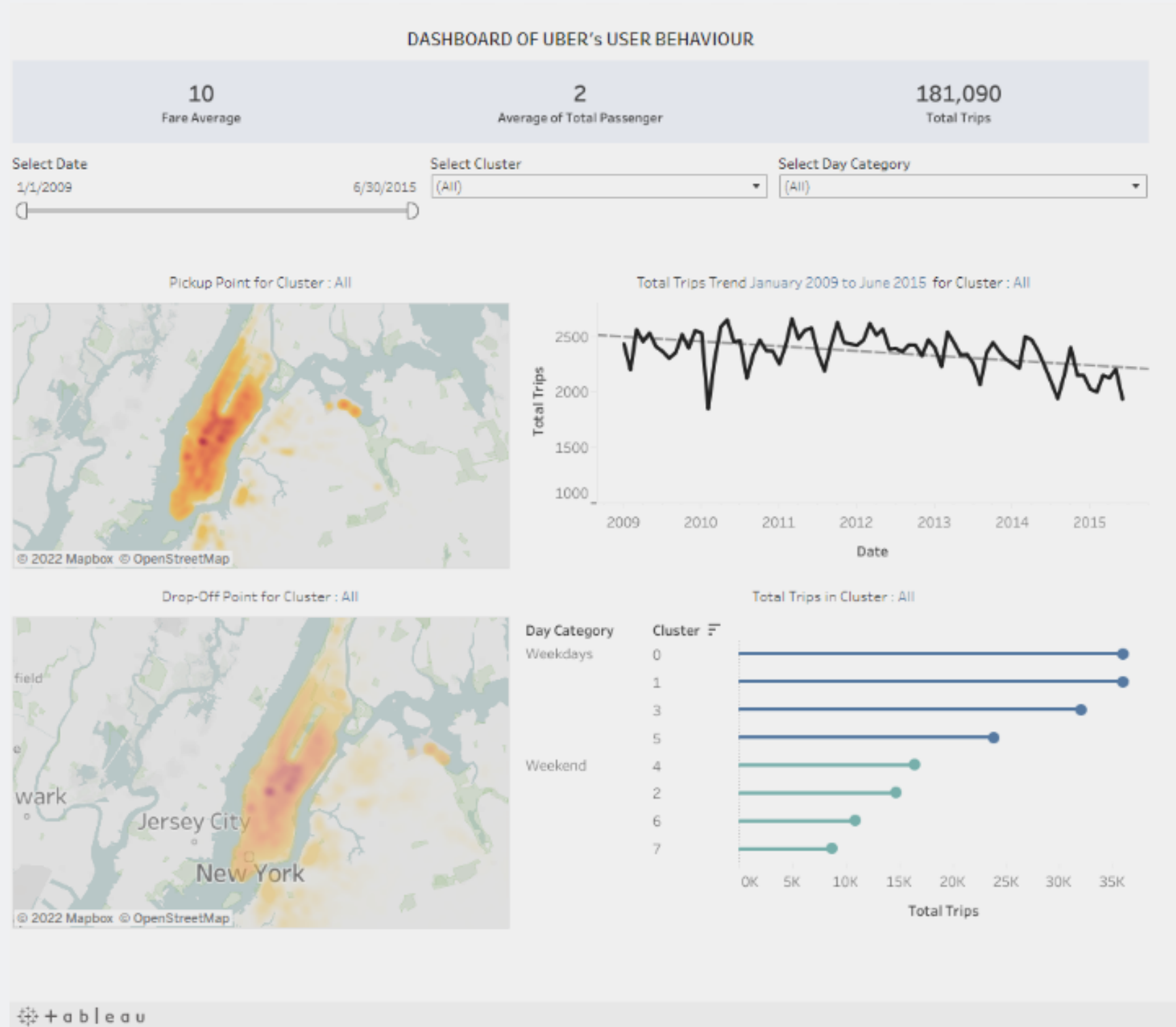
Results

Recommendation

References



← → ↺ 🔍 Dashboard by Tableau





Title Page

Proprietors

Introduction

Project Goals

Methodology

Results

Recommendation

References



← → 🔍 Appendices



References

01 **Data Uber by Kaggle**

02 **Script Data Preparation, Segmentation, Prediction by Python**

03 **Dashboard by Tableau**



Thank You

" It's not about ideas.
It's about making ideas happen. "
- Scott Belsky

Thanks to Kak Arief as Our Beloved TL of Team 5, Kak Anggit as SM Barcelona, Kak Rahmat, Kak Darwin, Kak Mirza, Kak Auzan, Kak Wilsan and Kak Indah as Instructors, and All Barcelona TLs and Students.