**Proposal Report**

# **Uber & Lyft Cab prices**

**Introduction:**

"Uber and Lyft Taxi Costs" is the primary focus of our data research and visualization effort. Ride-hailing services like Uber and Lyft have revolutionized the transportation sector by giving customers a quick and affordable substitute for conventional taxis. However, depending on the pick-up and drop-off locations, the time of day, the demand, and other variables, cab fares can change. With the help of this project, users will be able to make well-informed decisions regarding their mode of transportation by analyzing and visualizing data on Uber and Lyft cab prices.

**Data Set:**

<https://www.kaggle.com/datasets/ravi72munde/uber-lyft-cab-prices>

<https://www.kaggle.com/datasets/ravi72munde/uber-lyft-cab-prices?select=cab_rides.csv>

<https://www.kaggle.com/datasets/ravi72munde/uber-lyft-cab-prices?select=weather.csv>

We have chosen a set of statistics that details the costs of Uber and Lyft cabs in different American cities. The variables in the data set include pick-up and drop-off locations, trip distance, time of day, day of the week, and cab fare. In order to examine how weather affects cab pricing, we will also incorporate weather data. The data set was processed and sanitized before being made available for examination from public sources.

**Key Audience:**

Users of Uber and Lyft who are curious to compare the costs of various modes of transportation, is the target market for our data visualization. Policymakers and other stakeholders in the transportation sector who want to understand the variables affecting cab prices and make data-driven decisions may find this visualization to be helpful.

**Strategic-level Questions:**

1.) What are the factors that influence Uber and Lyft cab prices, and how do they vary by city and time of day?

Descriptive Sub-Question:

What are the average cab prices for Uber and Lyft in each city?

Predictive Sub-Question:

Can we predict cab prices based on factors such as distance, time of day, and weather conditions?

Prescriptive Sub-Question:

Can we recommend the best times and locations to use Uber and Lyft to get the lowest prices?

2.) How do weather conditions affect Uber and Lyft cab prices, and how can users take advantage of this information to save money?

Descriptive Sub-Question:

What are the typical weather conditions in each city where Uber and Lyft operate?

Predictive Sub-Question:

How much money can users save by choosing to ride at certain times based on weather conditions?

Prescriptive Sub-Question:

How should Uber and Lyft adjust prices based on weather conditions in different cities?

3.) How do cab prices compare between Uber and Lyft, and how can users choose the most cost-effective option?

Descriptive Sub-Question:

How do cab prices vary based on pick-up and drop-off locations?

Predictive Sub-Question:

Can we predict which service (Uber or Lyft) will be cheaper for a given trip?

Prescriptive Sub-Question:

Can we recommend which service (Uber or Lyft) to use based on the expected price and other factors such as distance and time of day?