

# ORIE 4741 Project Proposal

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## 1 Introduction

Car-sharing services such as Uber and Lyft have gained tremendous popularity over the years. More and more people are relying on these platforms for daily transit as these services are often readily available and affordable. However, the ride prices are not constant. Instead, they can vary a lot, depending on factors such as distance to travel, time of the day, and the weather. For average users, it is of their best interest to be able to predict their ride prices so that they can avoid occasionally high "surge fees". The goal of this project, therefore, is to explore the relationship between ride prices and various factors including destinations, time, and weather.

## 2 Question

What are the deciding factors that affects the price of a cab ride (Namely Uber and Lyft) and to which extent do they determine ride prices?

## 3 Dataset

We have a dataset of cab rides(Uber and Lyft) along with a dataset of weather for locations in consideration. There are in total 18 covariates for the two datasets. The car rides dataset contains distance of the ride, cab type, time of the ride, source and destination, price, surge multiplier and cab ride type (e.g. Uber Pool, UberXL). The weather dataset includes factors such as time, location, rain, wind and humidity.

We are using the *Uber & Lyft Cab prices* dataset from Kaggle.com.

[Uber & Lyft Cab prices](#)

The code to scrape the cab rides data and weather data is open source, so in the future we might include more locations and time period using the code. We might also find other data sets to investigate.

## 4 Project Value

This project can be valuable to individuals as well as enterprises. For example, a student at Cornell wishing to take Uber to do grocery shopping can utilize our findings to select the best time of the day so that it is most affordable. For a large firm that relies on these services to send employees out for trips, to be able to predict prices of such rides can help cut expenses and make cost-efficient plans.