# **Project Title**

Impact of weather-related changes on ride share services in New York City

# **Team Members**

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# **Project Description/Outline**

Using census and weather, how are different ride share services impacted.

# **Research Questions to Answer**

1. What areas of the map are most affected by weather changes?
2. Ride cancellations by month?
3. What is $/mi across all ride share services?

# **Datasets to Be Used**

## Ride Share Sources

* 1. https://www.kaggle.com/fivethirtyeight/uber-pickups-in-new-york-city
  2. https://www.kaggle.com/ravi72munde/uber-lyft-cab-prices
  3. https://data.cityofnewyork.us/Transportation/2018-Yellow-Taxi-Trip-Data/t29m-gskq

## Weather Data

* 1. <https://openweathermap.org/api>
  2. <https://www.ncdc.noaa.gov/cdo-web/datatools/records>

## Census Data

* 1. https://www.census.gov/data/developers.html

## Alternative Sources

* 1. https://toddwschneider.com/posts/analyzing-1-1-billion-nyc-taxi-and-uber-trips-with-a-vengeance/

# **Rough Breakdown of Tasks**

## Scope

1. What boroughs?
   1. The Bronx, Brooklyn, Manhattan, Queens, and Staten Island
2. What ride share services?
   1. Yellow Cab, Uber
3. What year?
   1. 2019

## Data Handling

1. Import Taxi data (complete, still need Feb-Jun 2019)
2. Import Uber data (open, still need source)
3. Import weather data (open, solid lead)
4. Merge data sets by location and date (not started)
5. …

## Visualizations

1. What time frame during the day do we care about looking at?
2. What public events could skew the anticipated decline in ride share volume?
3. Do we focus our comparison on geographical areas or by ride share service?
4. Weather Events (refer to alt source for deciding these weather events)
   1. Snowfall: 4+ inches
   2. Rain: 0.5+ inches
5. Create bins for “weather event” and “non-weather event”
6. Avg ride share volume by borough on “non-weather event” days
   1. Bar chart of each volume (total NYC rides)
   2. Pie chart of relative volume (% of total NYC Rides)
7. Avg ride share volume by borough on “weather event” days
   1. Bar chart of each volume (total NYC rides)
   2. Pie chart of relative volume (% of total NYC Rides)
8. Show percent decline of rides for each borough given a “weather event”
   1. Bar chart
   2. Heat Map