DATA 557A: FINAL PROJECT PRELIMINARY PROPOSAL

GROUP DETAILS

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PRELIMINARY HYPOTHESIS

Some of the potential questions which we seek to find answers to are as follows:
- Is the average travel speed in Seattle significantly different from speed in San Francisco or New York?
- How does travel time in Seattle compare in 2017 vs 2018 vs 2019?
- Is the travel time comparable during the different festival weeks in the US? We would like to consider weeks of Christmas vs Thanksgiving in 2018 and 2019 for this analysis.
- How do the travel time and speed differ on Friday vs Saturday vs Sunday?

DATA DETAILS
Uber Speed Data

This dataset provides the average speed and travel time on a given road segment for each hour of each day in the specified month. It only includes road segments with at least 5 unique trips in that hour. Dataset is available for download at the following link.
https://movement.uber.com/cities/seattle/downloads/speeds?lang=en-US&tp[y]=2019&tp[q]=4

Data Quality Analysis

- A reasonably large dataset with millions of data points at a daily level from 2018 to 2019 worldwide for all countries where Uber is providing services, maintained by Uber
- No cleaning required, no missing values

Data Schema

Column Name	Description	Type
year	Year (local city time)	int
quarter	Quarter 1-4 (local city time)	int
hour_of_day	Hour of day 0-23 (local city time)	int
osm_way_id	Corresponding OpenStreetMap Way ID for this segment. Note that one OpenStreetMap Way may contain multiple Movement segments.	bigint
osm_start_node_id	Corresponding OpenStreetMap Node ID for this junction.	bigint
osm_end_node_id	Corresponding OpenStreetMap Node ID for this junction.	bigint
speed_mph_mean	Average speed of Uber vehicles on this road segment in mph	float
speed_mph_stdev	Standard deviation of speeds on this road segment in mph	float
speed_mph_p50	50th percentile (median) speed of Uber vehicles on this road segment in mph	float
speed_mph_p85	85th percentile speed of Uber vehicles on this road segment in mph	float