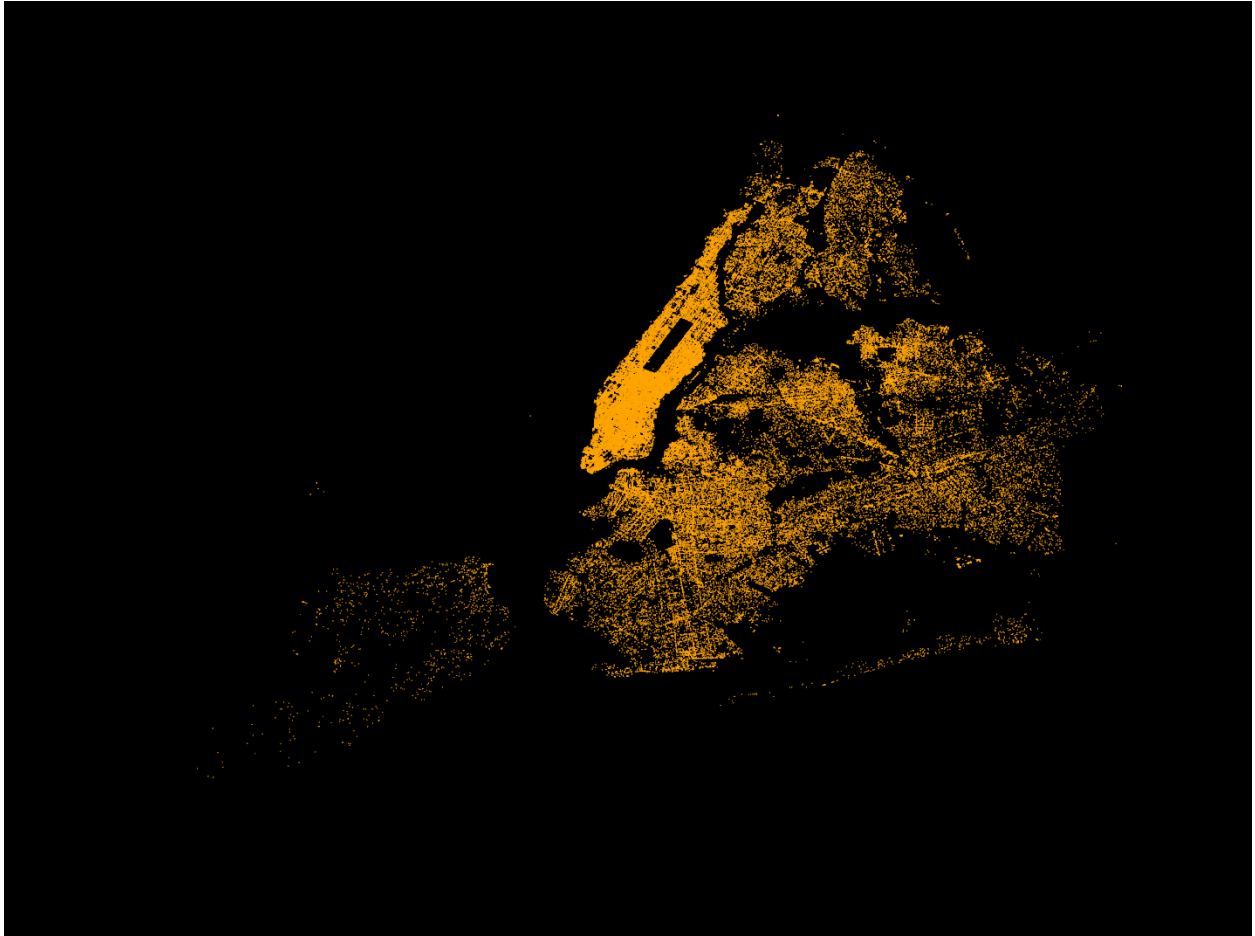


A Look into FHV Accessibility

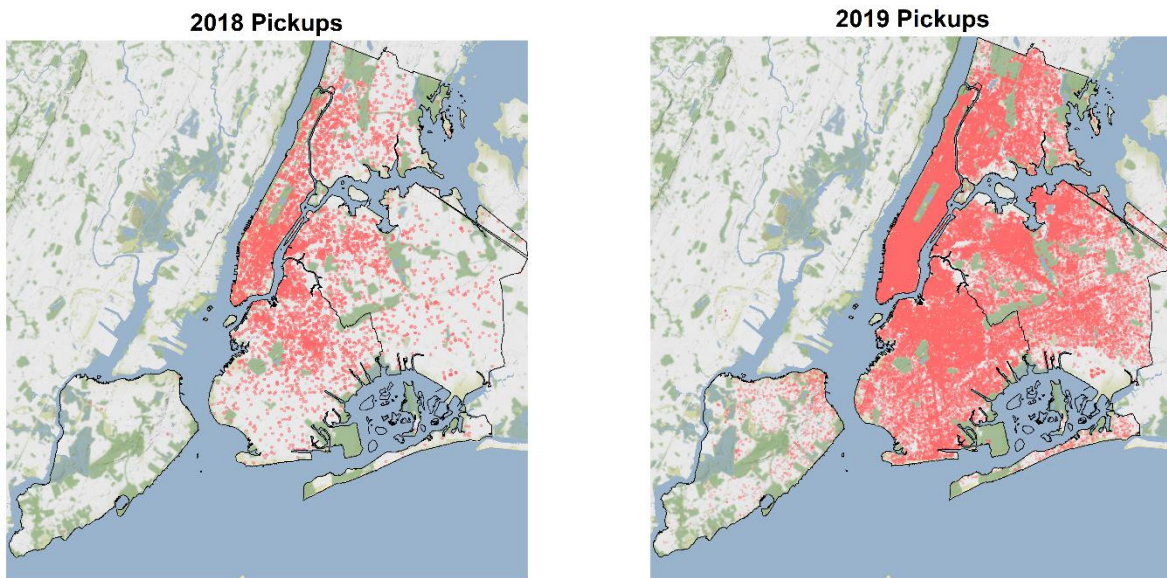


By Jean Chang

The New York City Taxi and Limousine Commission (TLC) has implemented new rules to make New York City accessible to all residents and visitors, including those who use wheelchairs. On October 3, 2018, TLC adopted two rules. The requirement applies to all For-Hire Vehicle (FHV) bases including smaller community car services, larger livery and black car bases, and the high-volume services: Uber, Lyft, Via, and Juno. The first option is to dispatch an increasing share of trips to wheelchair accessible vehicles (WAVs) until 25% of all trips are fulfilled by a WAV (trip mandate). The second option allows FHV bases to work with an approved dispatcher and guarantee 60% of all trips to have wait times less than 15 minutes and 90% in less than 30 minutes in 2019. The percentages will increase each year until 2021 (dispatch exception).

Comparison to 2018

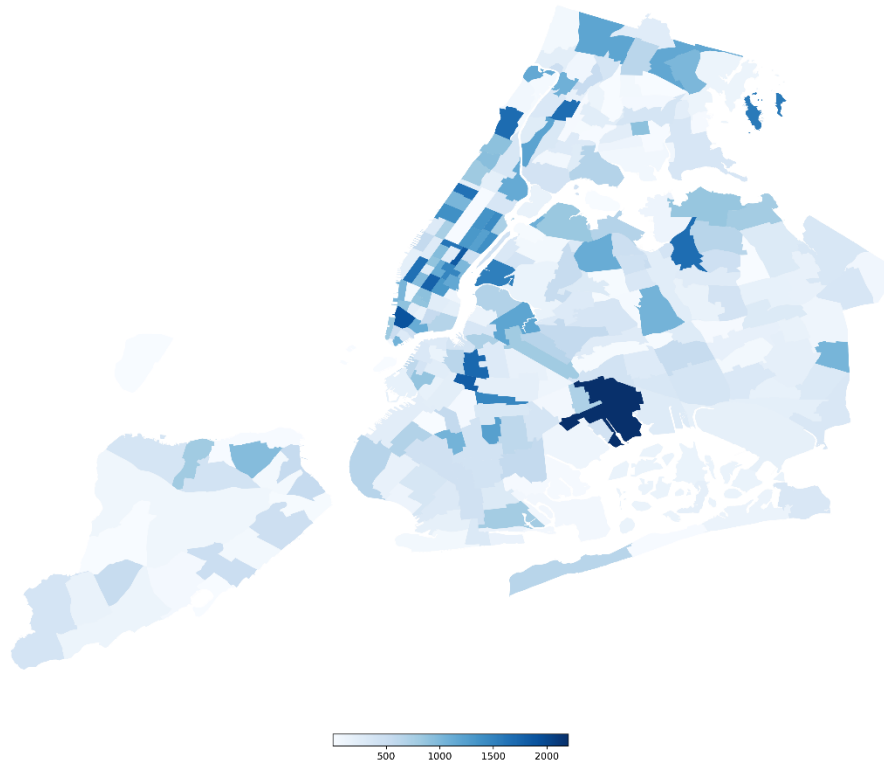
To see the travel patterns of passengers in FHV WAVs, trip data for June 2018 and June 2019 was analyzed. Based on trips made in June 2018, most of the trips were made in Lower Manhattan and parts of Brooklyn and Queens. There was an average of 36 vehicles on the road. Compared to last year, the number of FHV WAVs has increased significantly with an average of 579 vehicles on the road. Now trips are made in Manhattan, Brooklyn, Queens, Bronx and a few in Staten Island.



Which regions have the most pick-ups and drop-offs?

For a closer look on FHV accessibility trips made, pick-up and drop-off locations were analyzed by taxi zones. The data showed that the top 5 pick-up zones are East Harlem South, Central Harlem North, Lenox Hill East, Washington Heights South, located in Manhattan, and Forest Hills, located in Queens. The top 5 drop-off zones are East Harlem South, Washington Heights South, Central Harlem North, Lenox Hill East, located in Manhattan, and Borough Park, located in Brooklyn.

Trips by Taxi Zone



Top 5 Pick-up Taxi Zones

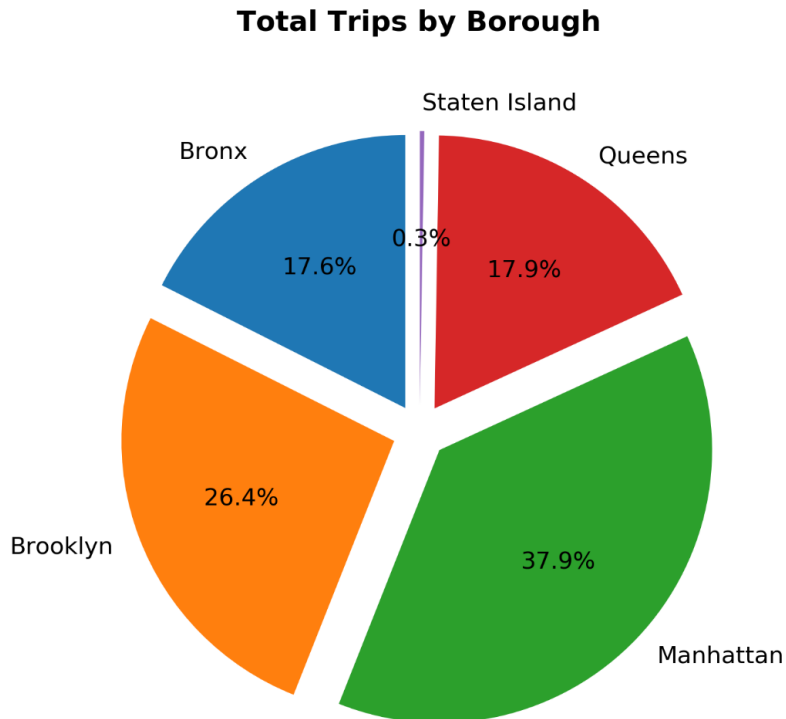
1. East Harlem South, Manhattan
2. Central Harlem North, Manhattan
3. Lenox Hill East, Manhattan
4. Washington Heights South, Manhattan
5. Forest Hills, Queens

Top 5 Drop-off Taxi Zones

1. East Harlem South, Manhattan
2. Washington Heights South, Manhattan
3. Borough Park, Brooklyn
4. Central Harlem North, Manhattan
5. Lenox Hill East, Manhattan

Are FHV WAVs serving outer boroughs as well?

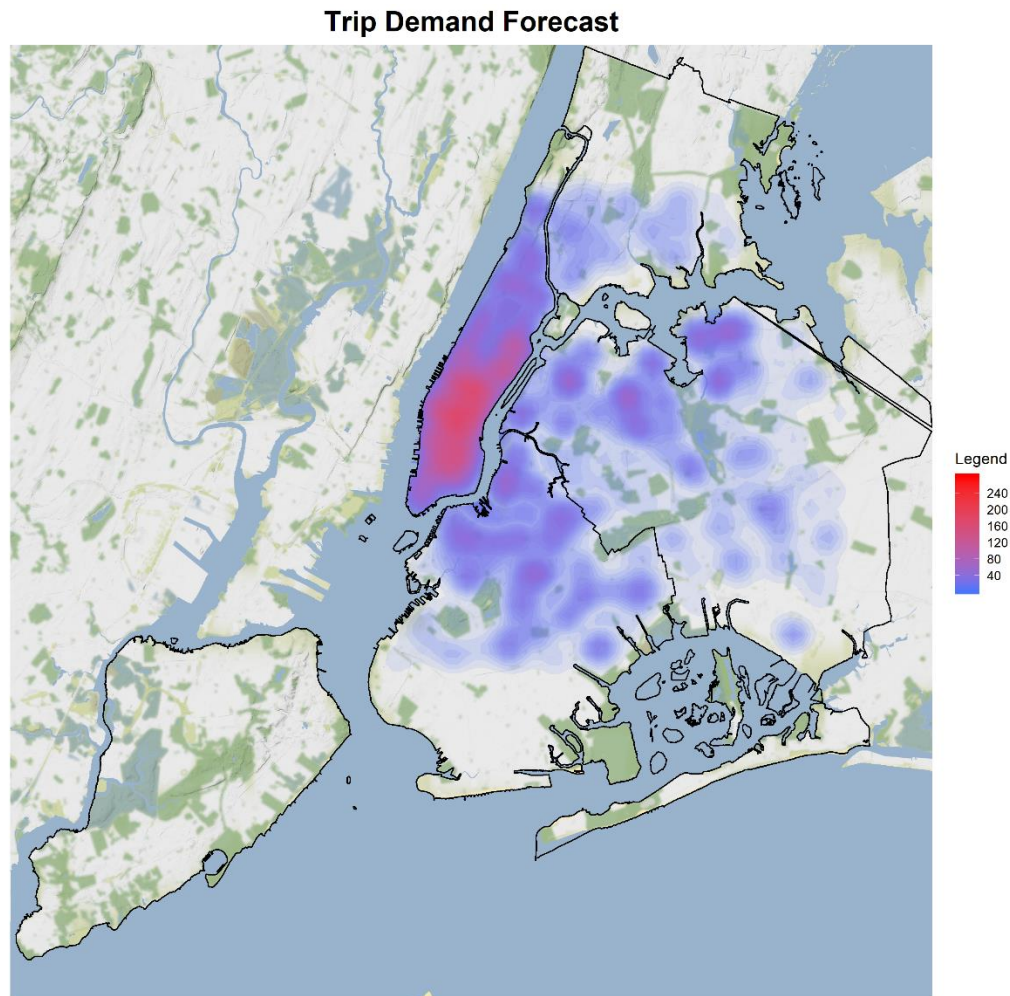
Most FHV accessibility trips are performed in Manhattan compared to the other boroughs. In June 2019, there were 3,193 trips in Manhattan which is 38% of all FHV accessibility trips in New York City, followed by Brooklyn with 2,228 trips, Queens with 1,509 trips, Bronx with 1,482 trips, and Staten Island with only 22 trips.



Trips by Borough

1. Manhattan – 38%
2. Brooklyn – 26%
3. Queens – 18%
4. Bronx – 18%
5. Staten Island – 0.3%

Demand Predication



A predictive model was developed to predict future demand of FHV accessibility trips in New York City. As illustrated by the heatmap shown above, trips in Manhattan are still in demand, while Brooklyn and Queens are predicted to have more trips. Nonetheless, the FHV Accessibility programs will increasingly provide access and continue to be a reliable service for passengers in wheelchairs.

Jean Chang is a Data Analyst at the New York City Taxi and Limousine Commission