MTA Data and the Transition Back to the Office

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How back to the office are we?

- How have various NYC neighborhoods transitioned back to work?
  - How much did ridership fall relative to pre-COVID levels?
  - How quickly has ridership started to normalize?

- This question could serve many functions:
  - Where should a popular workday lunch spot open their next franchise?
  - Where has the return to the office lagged, and a company may receive favorable pricing on a new headquarters?

Defining the question

- Measure change in traffic across “commute stations”

- How do we define commute stations?
  - High exits on weekday mornings
  - High entries weekday evenings

- Over what timeframe:

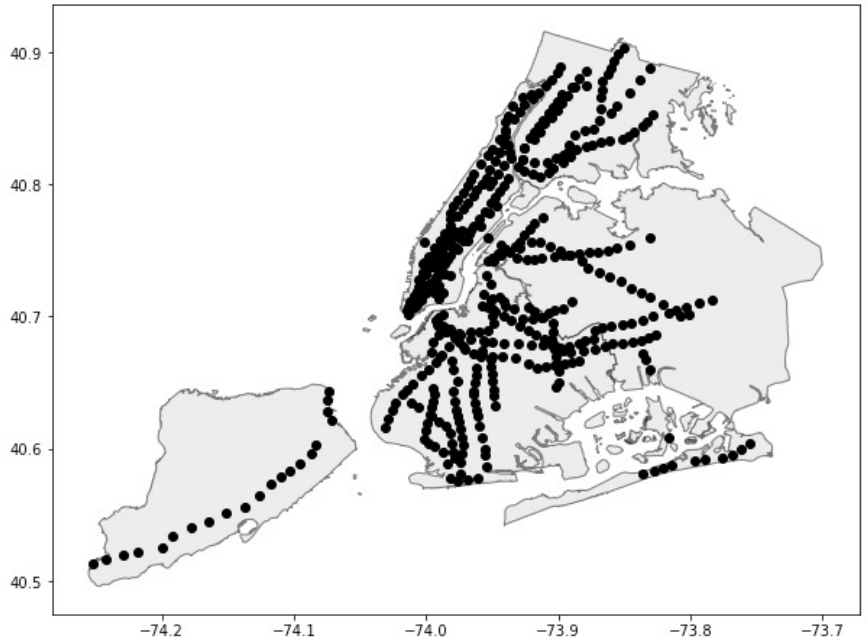
  Pre-Covid timeframe: April & May 2019

  Peak-Covid timeframe: April & May 2020

  Late-Covid timeframe: April & May 2021

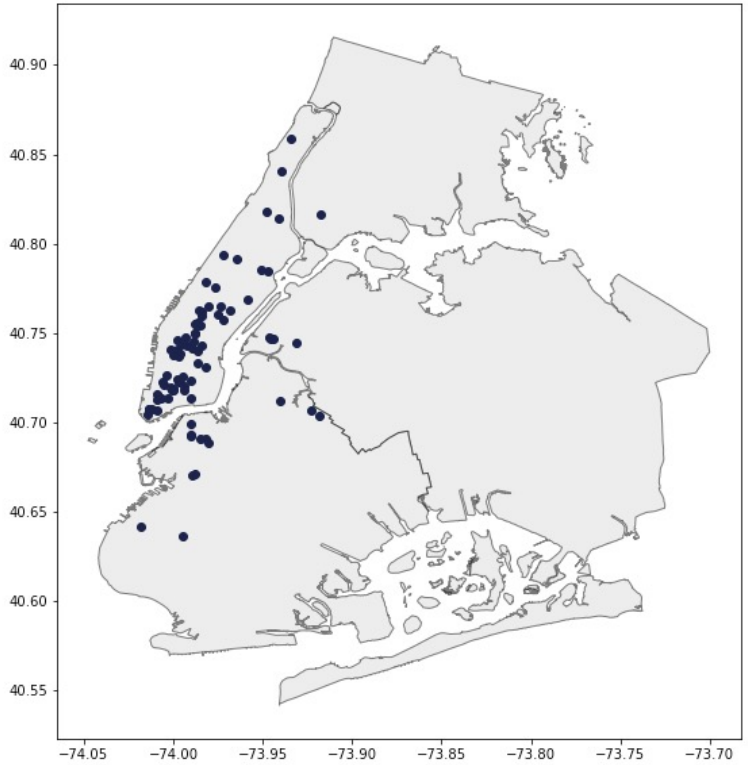
Our Commute Zone subgroup

All MTA stations

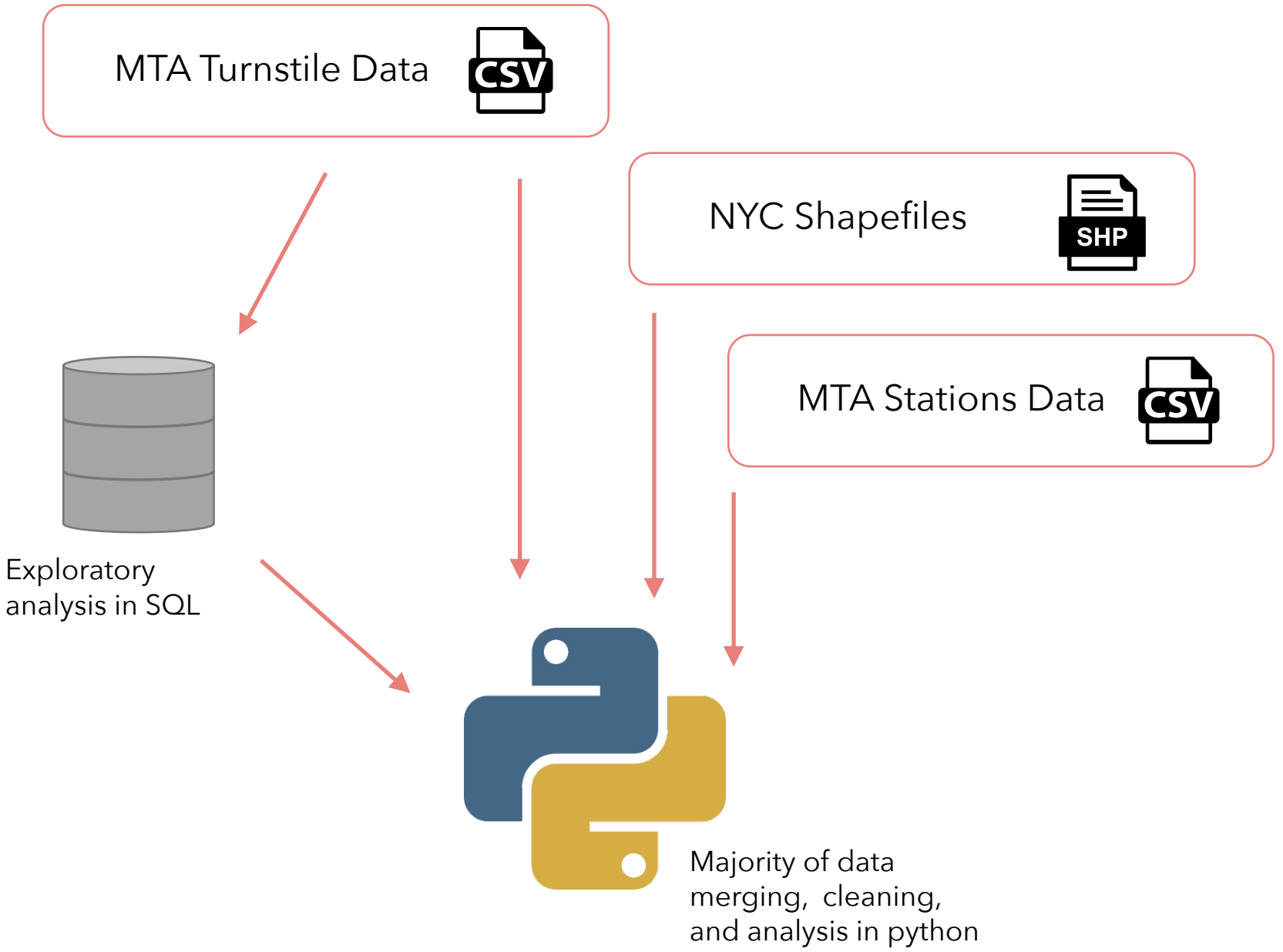


The 65 “Commute Zone” stations we will look at account for 17% of all MTA stations, but account for ~ 40% of the total entry/exit flow

“Commute Zones”

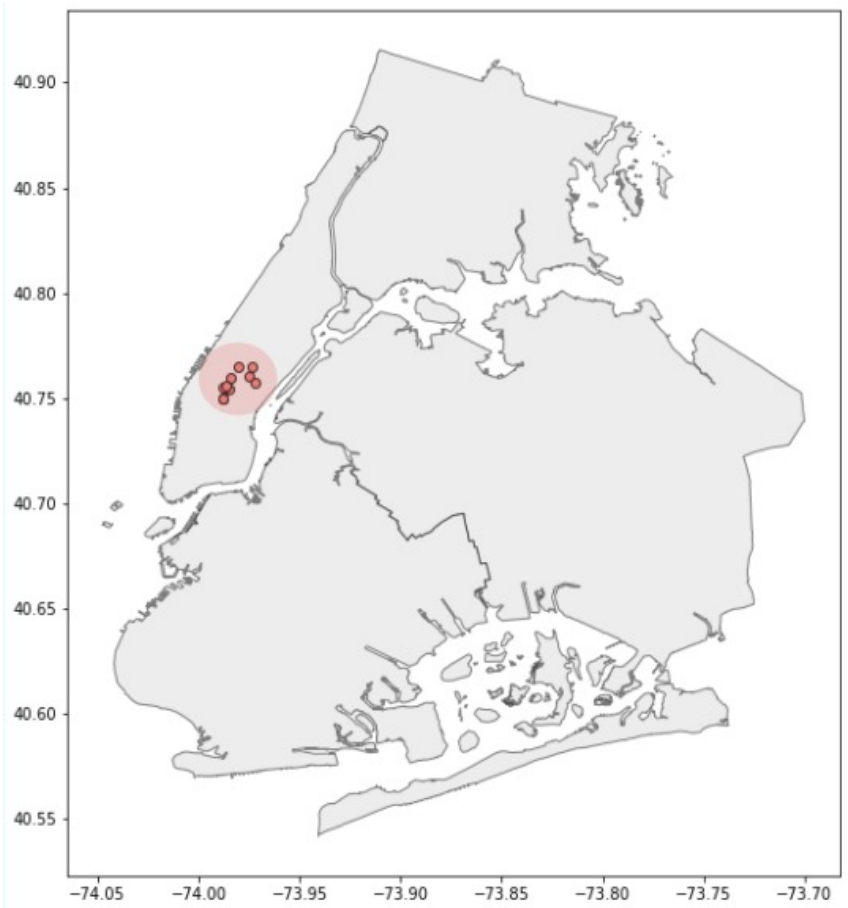


Workflow

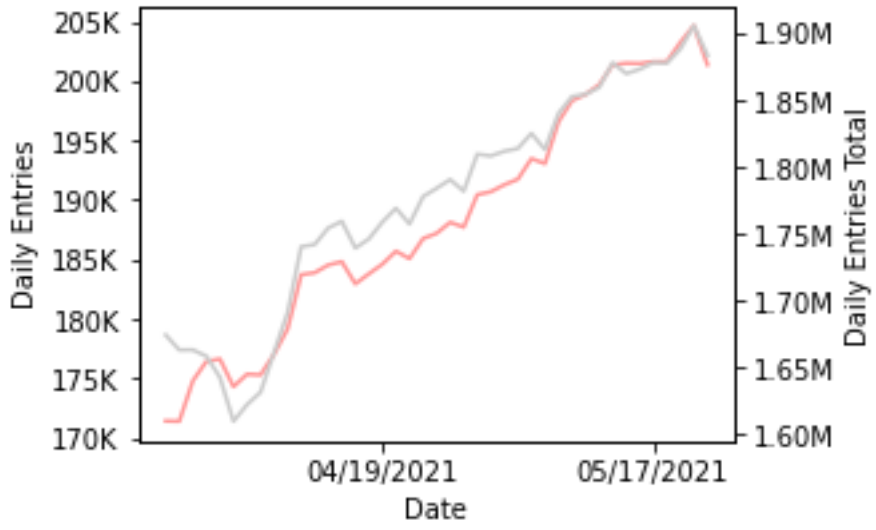

MTA Turnstile Data
CSV
NYC Shapefiles
SHP
MTA Stations Data
CSV
Exploratory analysis in SQL
Majority of data merging, cleaning, and analysis in python

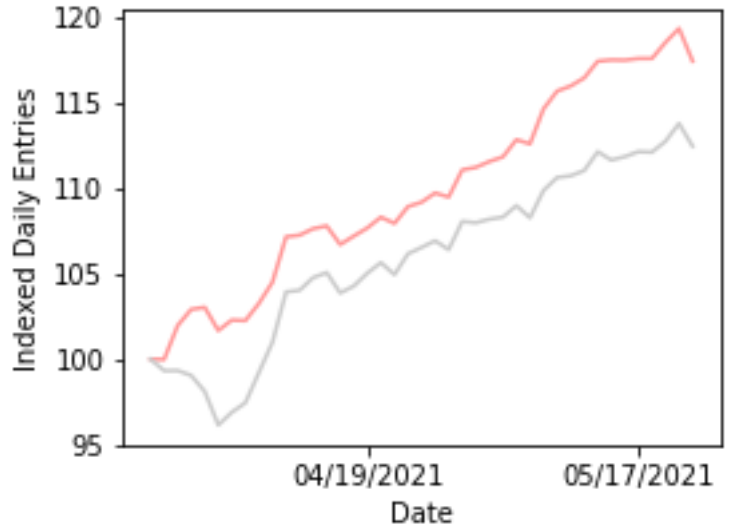
Midtown

Midtown ridership is only back to **~20%** of Pre-COVID ridership levels



Timeframe	Average daily ridership	As percentage of total ridership
Pre	859,502	14.84%
Peak	41,079	7.72%
Late	188,107	10.59%



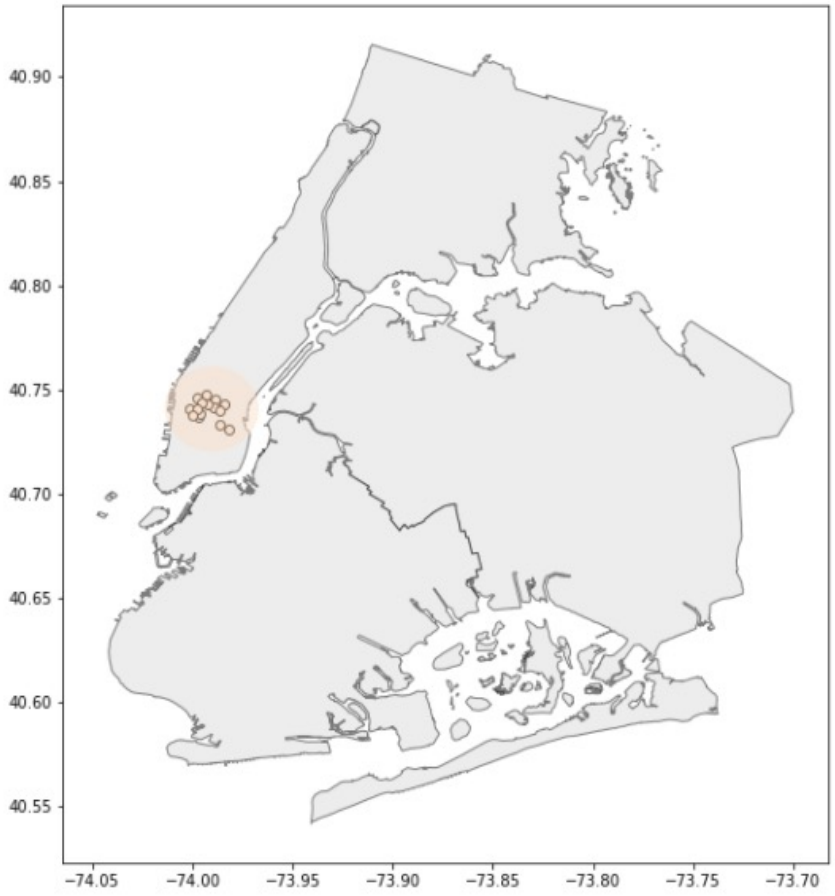


Midtown Commute Zone

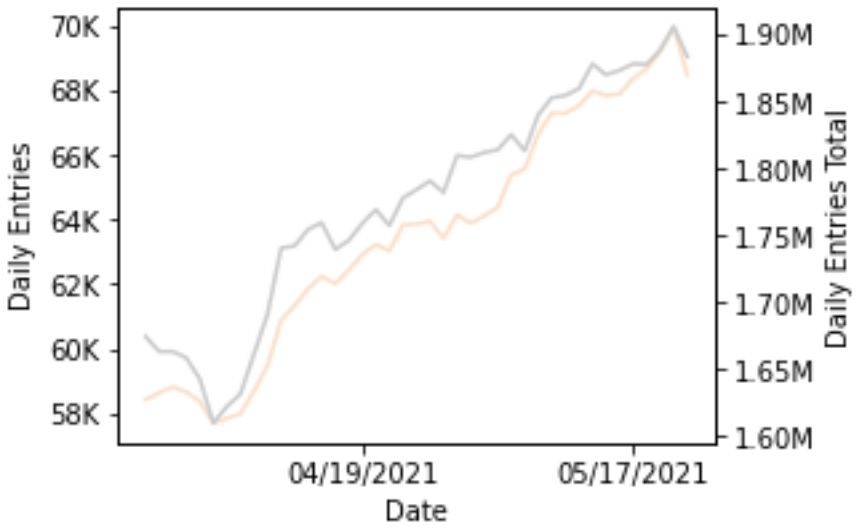
MTA overall

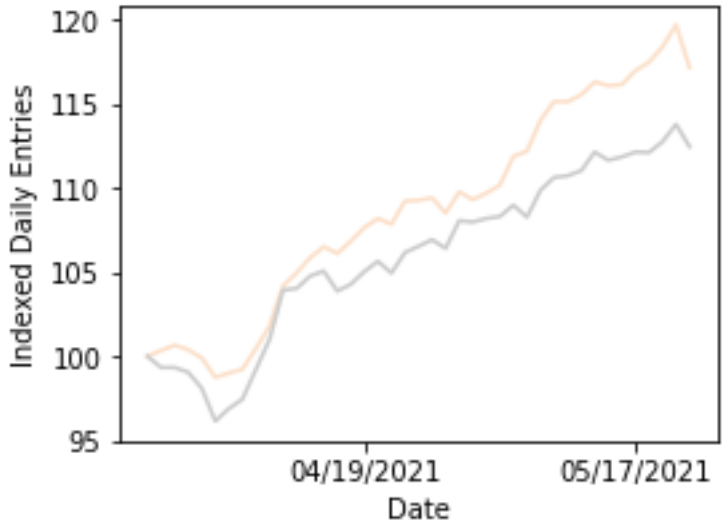
Central Manhattan

Peak to trough; Central Manhattan ridership went down ~20x as opposed to 10x across the entire MTA



Timeframe	Average daily ridership	As percentage of total ridership
Pre	262,668	4.53%
Peak	14,610	2.74%
Late	63,454	3.57%

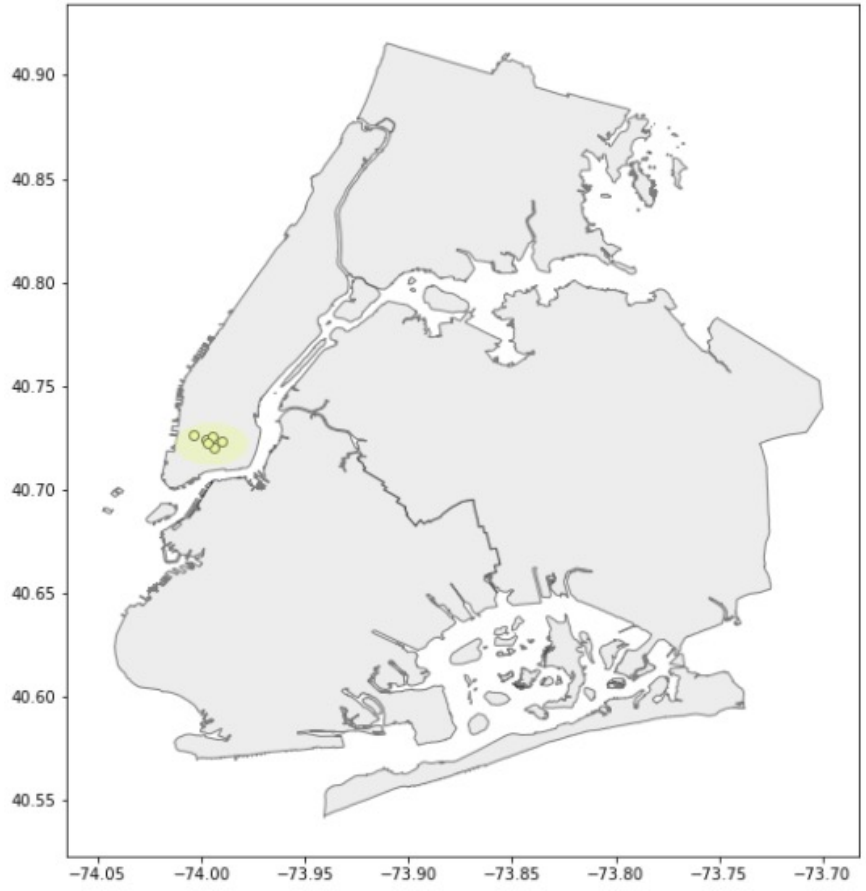




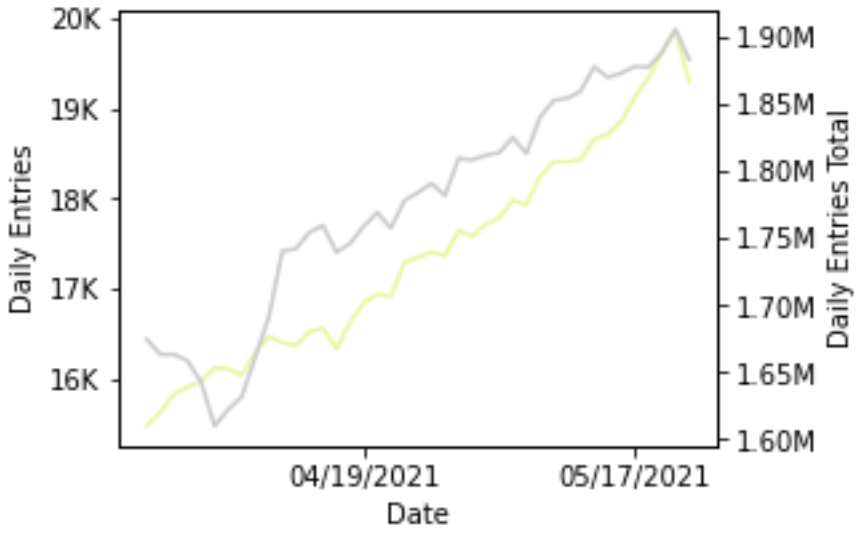
Central Manhattan Commute Zone — MTA overall

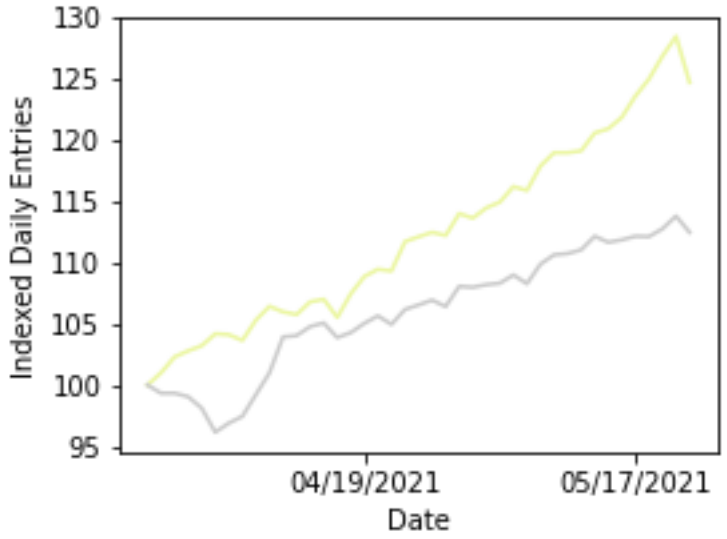
Lower Manhattan

Lower Manhattan showed the strongest post-vaccine trend



Timeframe	Average daily ridership	As percentage of total ridership
Pre	76,277	1.32%
Peak	3,368	0.63%
Late	17,358	0.98%



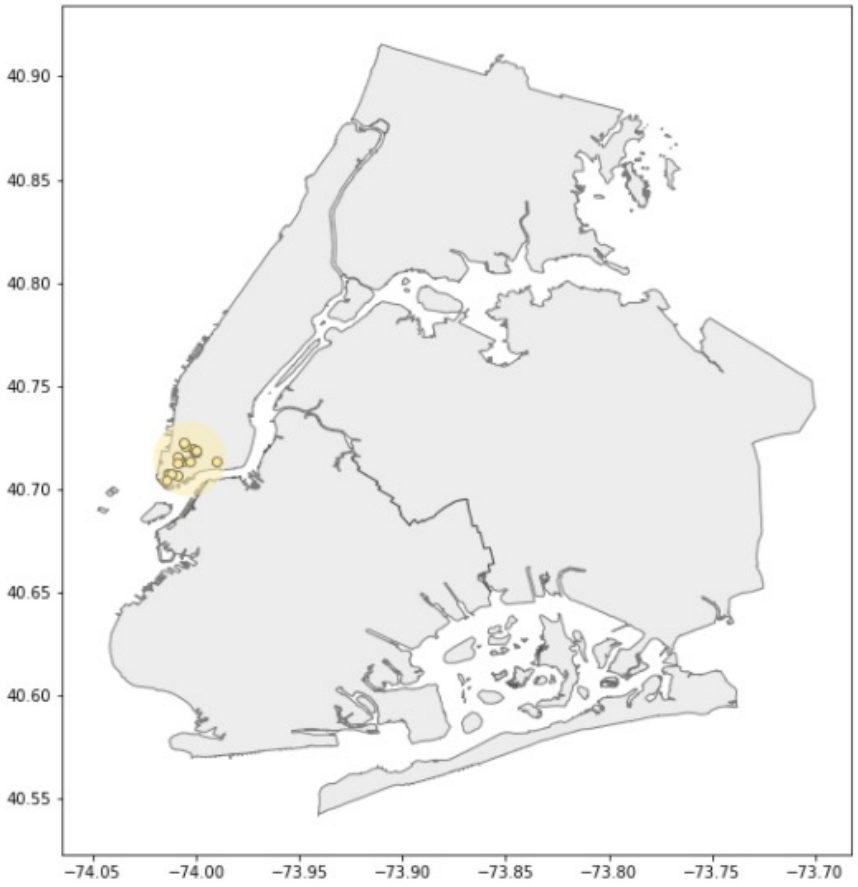


Lower Manhattan Commute Zone

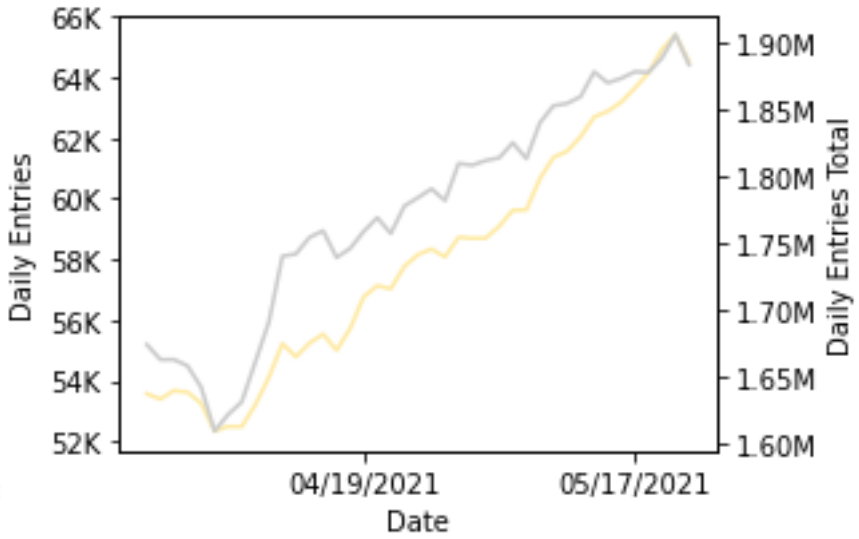
MTA overall

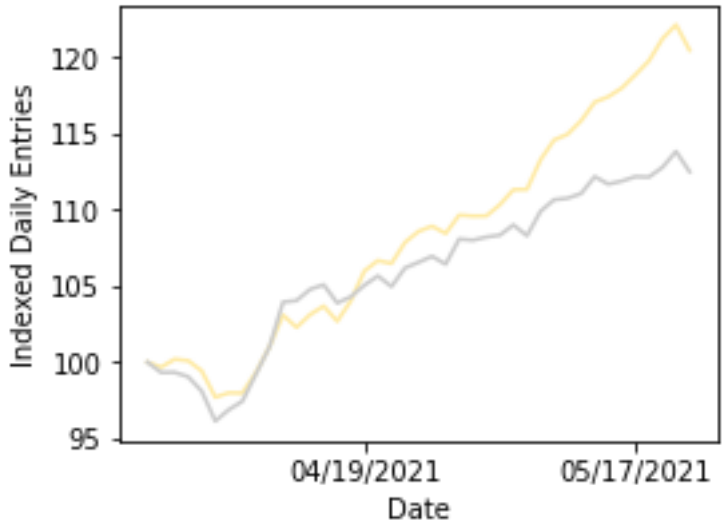
Financial District

Hardest hit, and least recovered; FiDi ridership fell to **~4%** of its pre-COVID ridership levels, but positive post-vaccine trend



Timeframe	Average daily ridership	As percentage of total ridership
Pre	291,009	5.02%
Peak	13,513	2.54%
Late	58,077	3.27%



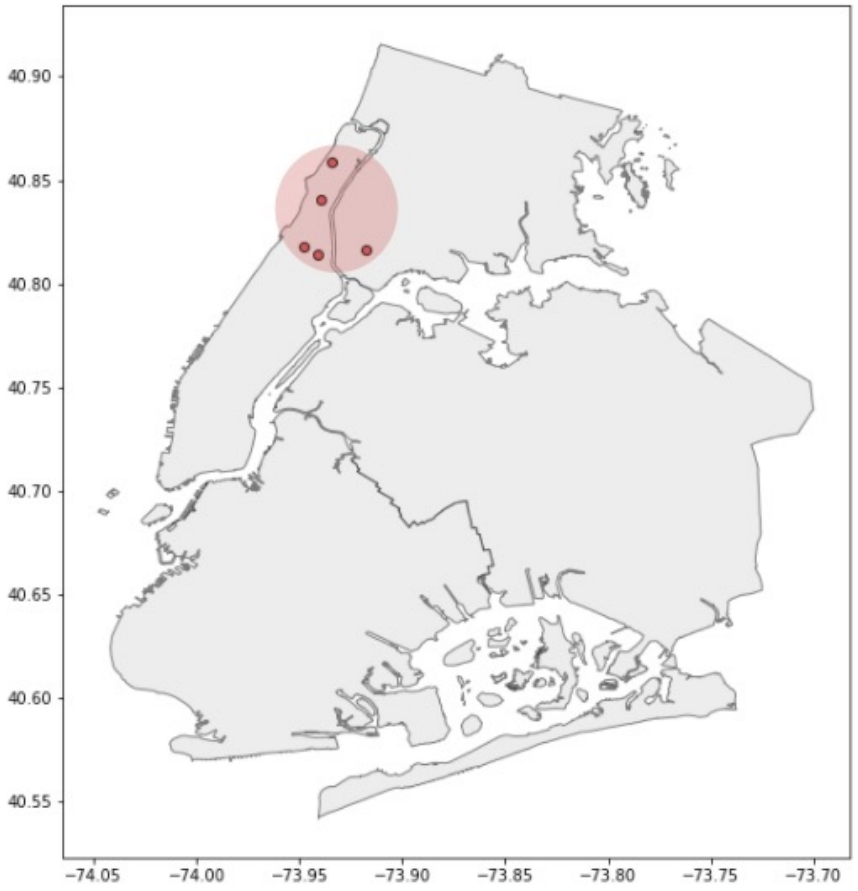


Financial District Commute Zone

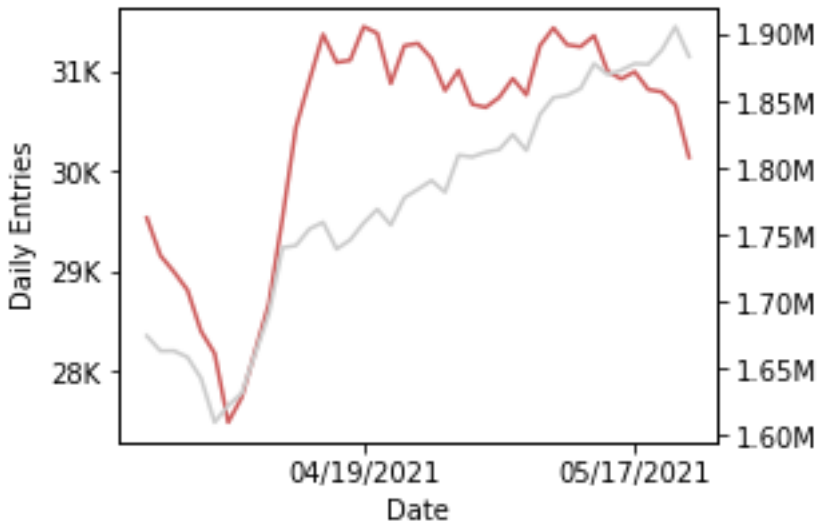
MTA overall

Harlem / Bronx

The Harlem/Bronx area almost **doubled** its representation in overall MTA ridership during the Peak-COVID timeframe, but underperformed the post-vaccine ridership bump



Timeframe	Average daily ridership	As percentage of total ridership
Pre	72,870	1.25%
Peak	12,297	2.31%
Late	30,305	1.70%

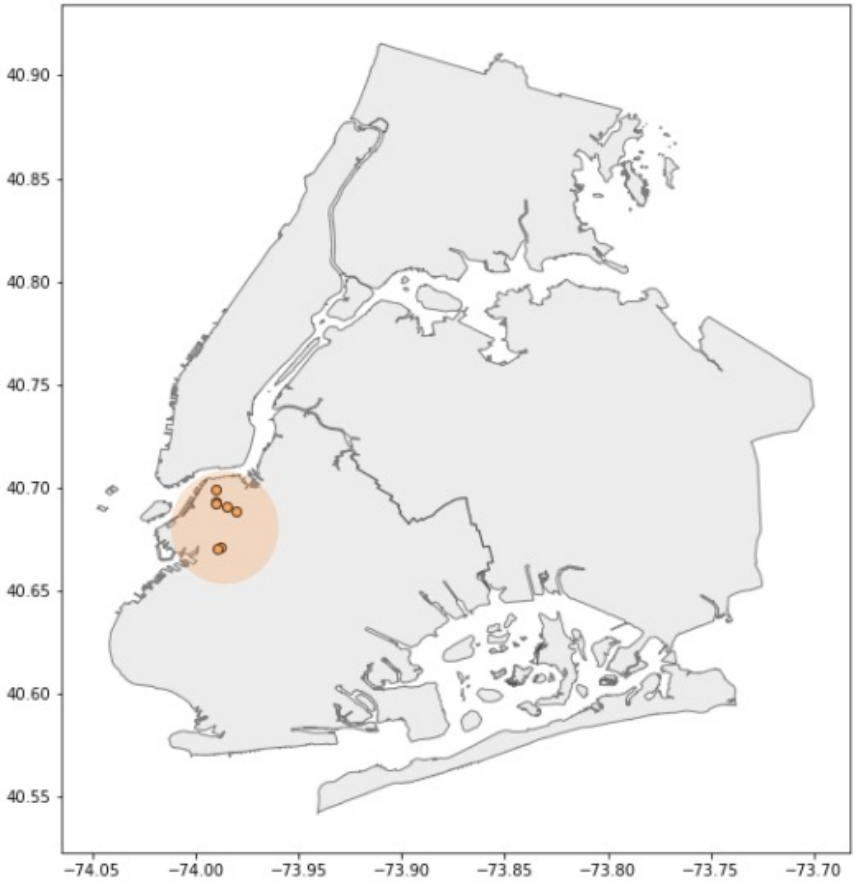


Harlem / Bronx Commute Zone

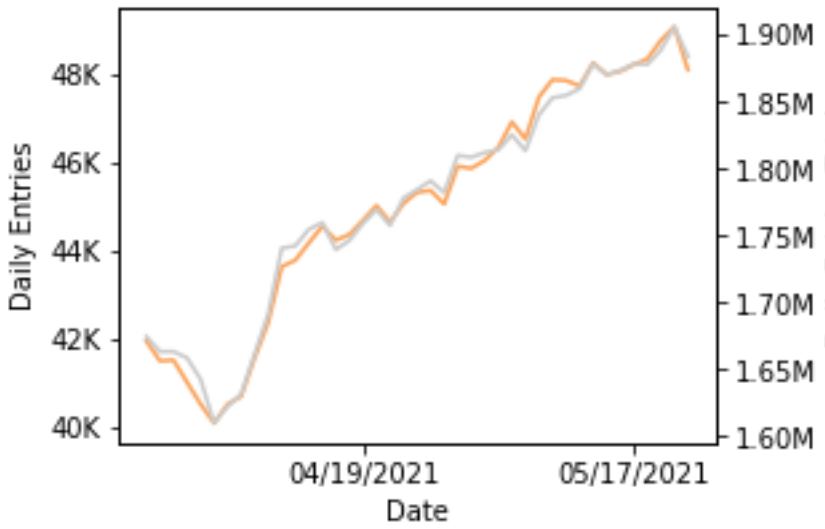
MTA overall

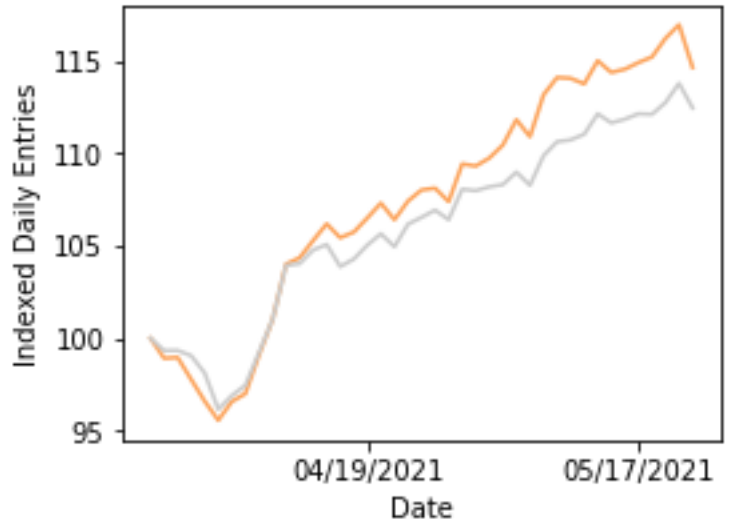
Downtown Brooklyn

Downtown Brooklyn consistently represented overall MTA trends



Timeframe	Average daily ridership	As percentage of total ridership
Pre	167,384	2.89%
Peak	13,450	2.53%
Late	45,044	2.54%

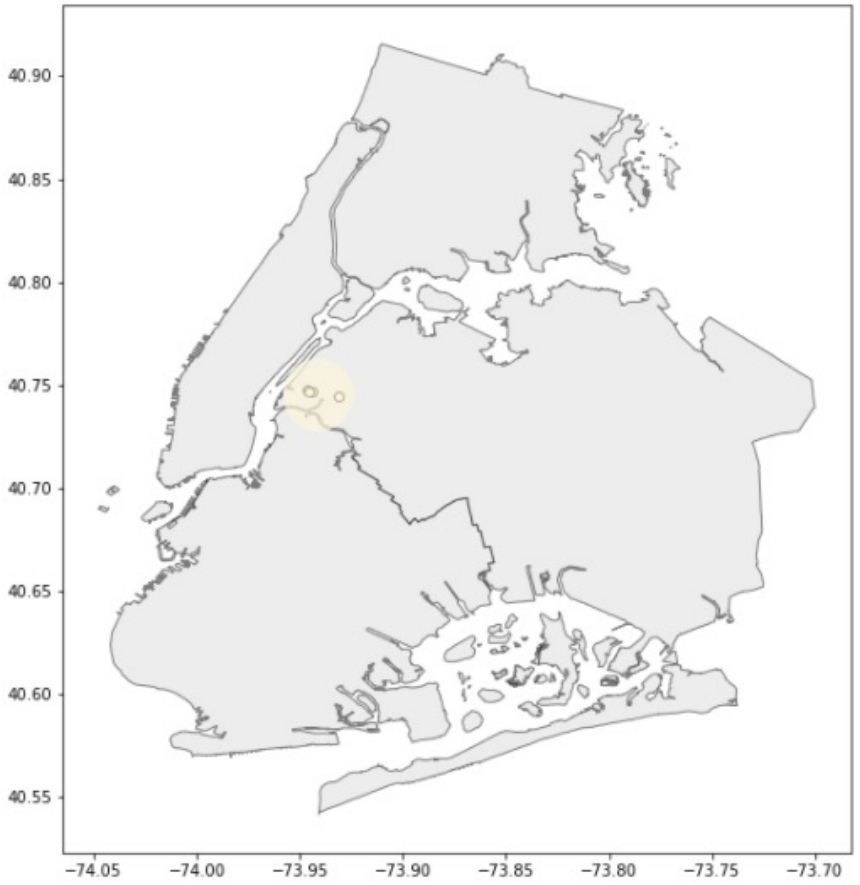




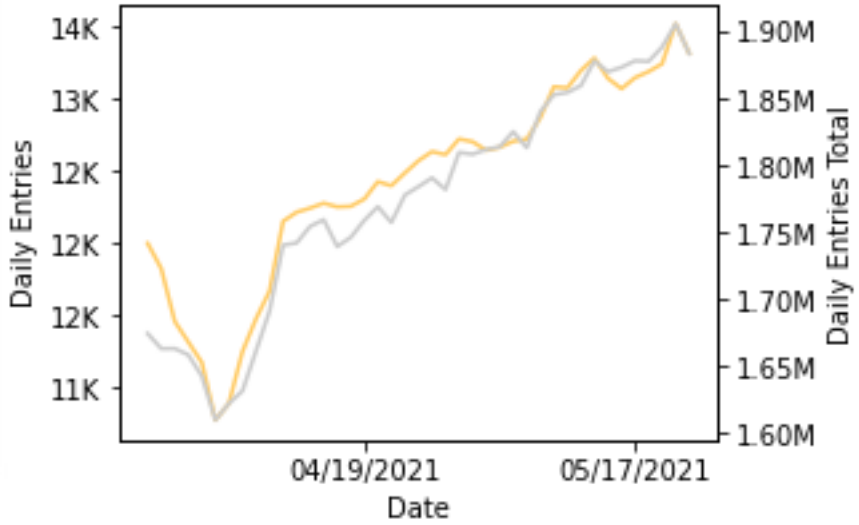
Downtown Brooklyn Commute Zone — MTA overall

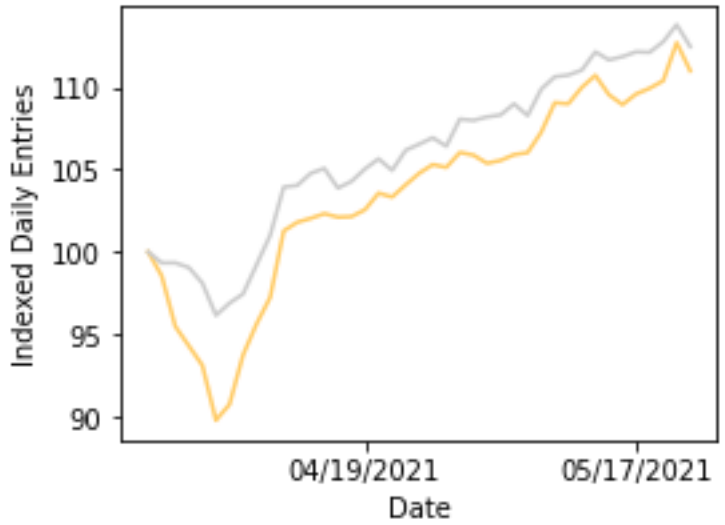
Long Island City

Long Island City consistently represented overall MTA trends



Timeframe	Average daily ridership	As percentage of total ridership
Pre	48,631	0.84%
Peak	3,504	0.65%
Late	12,429	0.7%



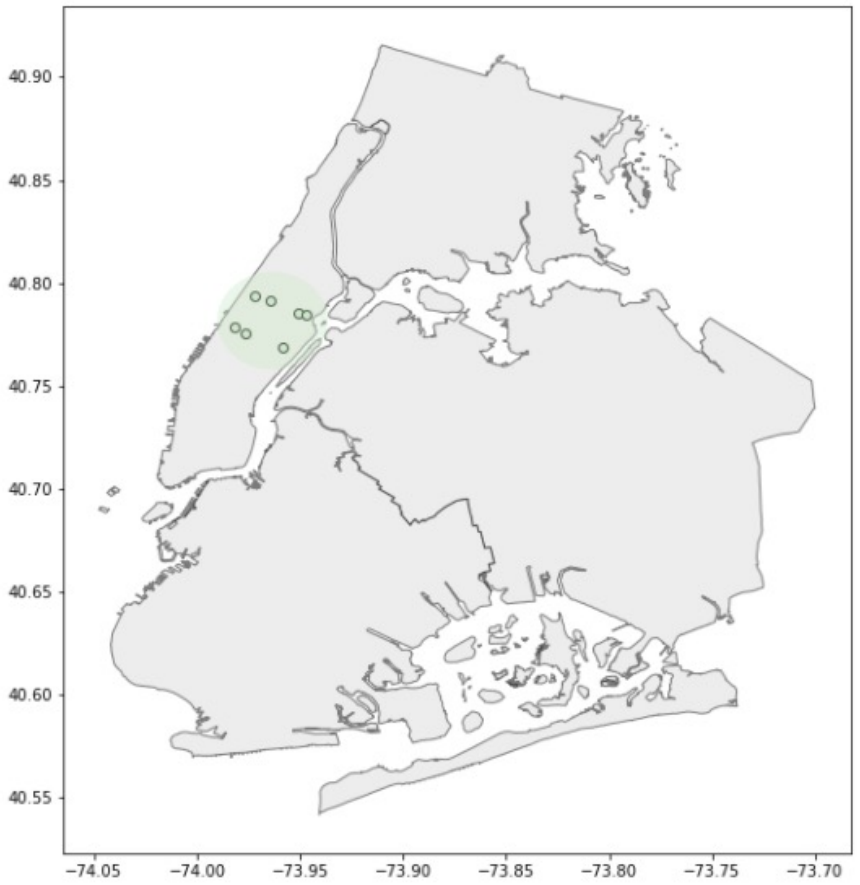


Long Island City Commute Zone

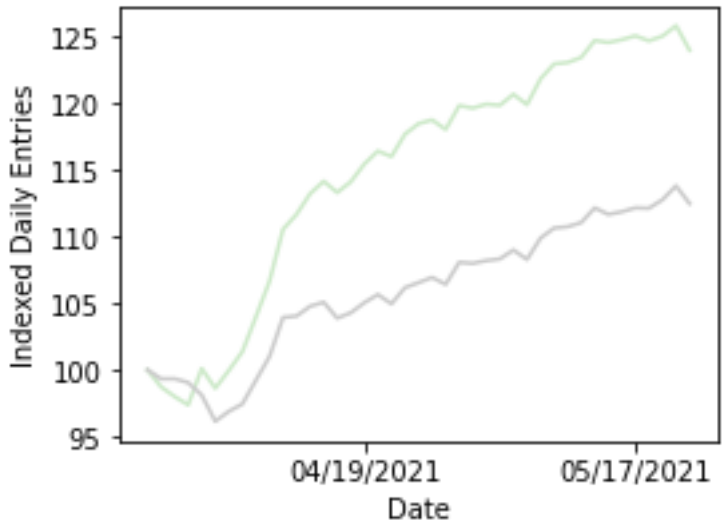
MTA overall

Uptown

Uptown now represents a **larger** percentage of overall MTA ridership than Pre-COVID



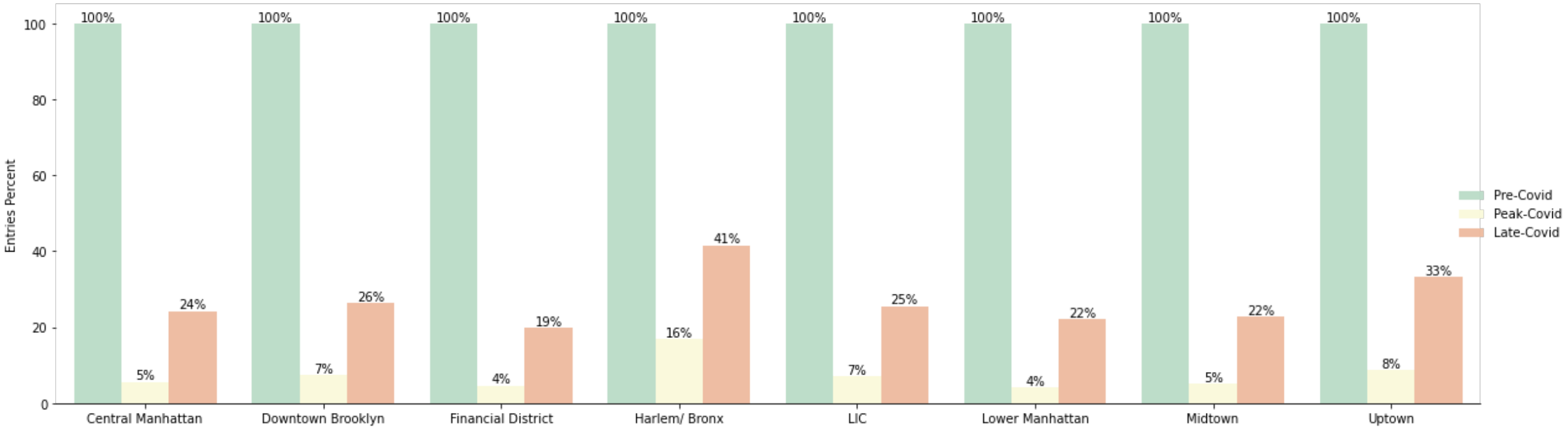
Timeframe	Average daily ridership	As percentage of total ridership
Pre	108,399	1.87%
Peak	9,510	1.78%
Late	36,156	2.04%



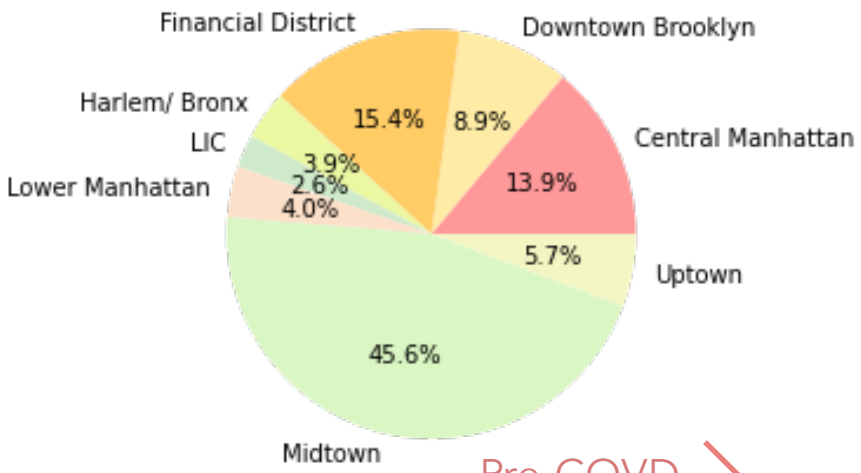
Uptown Commute Zone

MTA overall

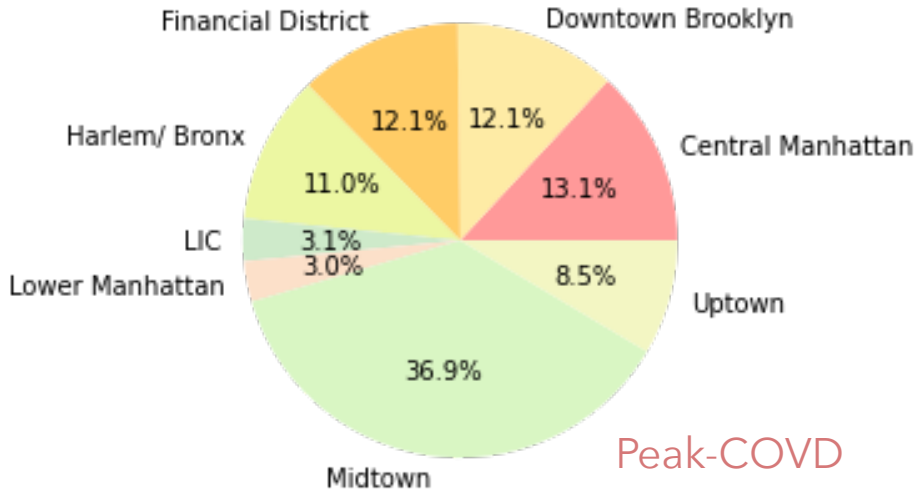
Cross neighborhood comparison



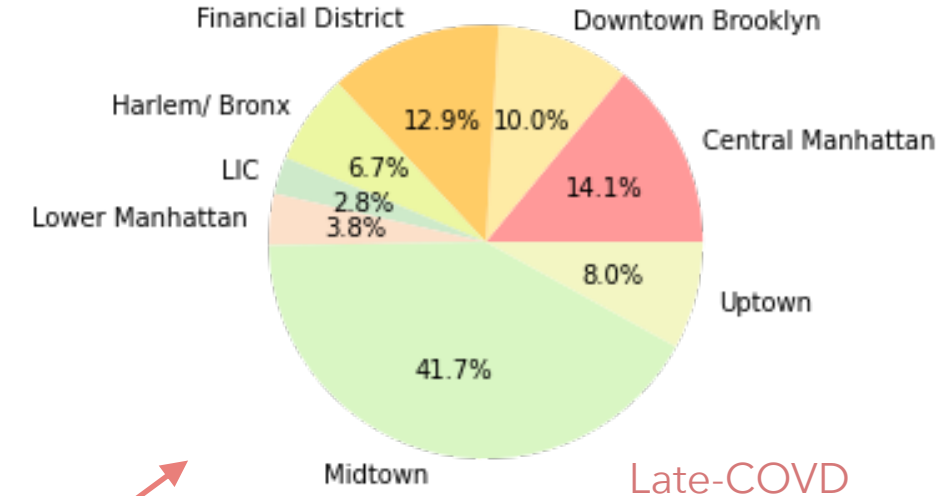
Cross neighborhood comparison



Pre-COVD



Peak-COVD



Late-COVD

Conclusions

Hardest Hit:

- Financial District
- Lower Manhattan
- Central Manhattan
- Midtown

Least Impacted:

- Harlem / Bronx

Swiftest post vaccine recovery :

- Uptown
- Lower Manhattan

Overall the MTA is currently back to ~30% of Pre-COVID levels, but the “Commute Zone” grouping is only back to **24%** of Pre-COVID levels

Future work

- Add a Post-COVID data set:
  - Are there permanent ramifications for certain neighborhoods?
- Overlay commercial real estate trends:
  - Will commercial properties in lagging commute zones be handicapped going forward?