New York City Bike Sharing

Clemens S. Heithecker and Thea A. Putnam

Datasets

JC-202110-citibike-tripdata.csv

ride_id	rideable_type	started_at	ended_at	start_station_name	start_station_id	end_station_name	end_station_id	start_lat	start_lng	end_lat	end_lng	member_casual
0FA0...	clasi...	2021-10-19 06:08:46	2021-10-19 06:11:26	Glenwo...	JC094	Sip Ave	JC056	40.7...	-74.1...	40.7...	-74.1...	member
0702...	clasi...	2021-10-...	2021-10-...	Glenwo...	JC094	Sip Ave	JC056	40.7...	-74.1...	40.7...	-74.1...	member
A881...	clasi...	2021-10-...	2021-10-...	Glenwo...	JC094	Sip Ave	JC056	40.7...	-74.1...	40.7...	-74.1...	member
C9A0...	clasi...	2021-10-...	2021-10-...	Glenwo...	JC094	Sip Ave	JC056	40.7...	-74.1...	40.7...	-74.1...	member
7DFD...	clasi...	2021-10-...	2021-10-...	Glenwo...	JC094	Sip Ave	JC056	40.7...	-74.1...	40.7...	-74.1...	member

2796493.csv

| STATION	NAME	DATE	PRCP	TMAX	TMIN
USW00094728	NY CITY CENTRAL PARK, NY US	2021-10-01	0	19.4	10.6
USW00094728	NY CITY CENTRAL PARK, NY US	2021-10-02	0	23.3	13.9
USW00094728	NY CITY CENTRAL PARK, NY US	2021-10-03	0	25	16.1
USW00094728	NY CITY CENTRAL PARK, NY US	2021-10-04	3.8	22.8	16.7
USW00094728	NY CITY CENTRAL PARK, NY US	2021-10-05	0	18.8	15.6

New York City Bike Sharing Database

Entity Relationships (1)
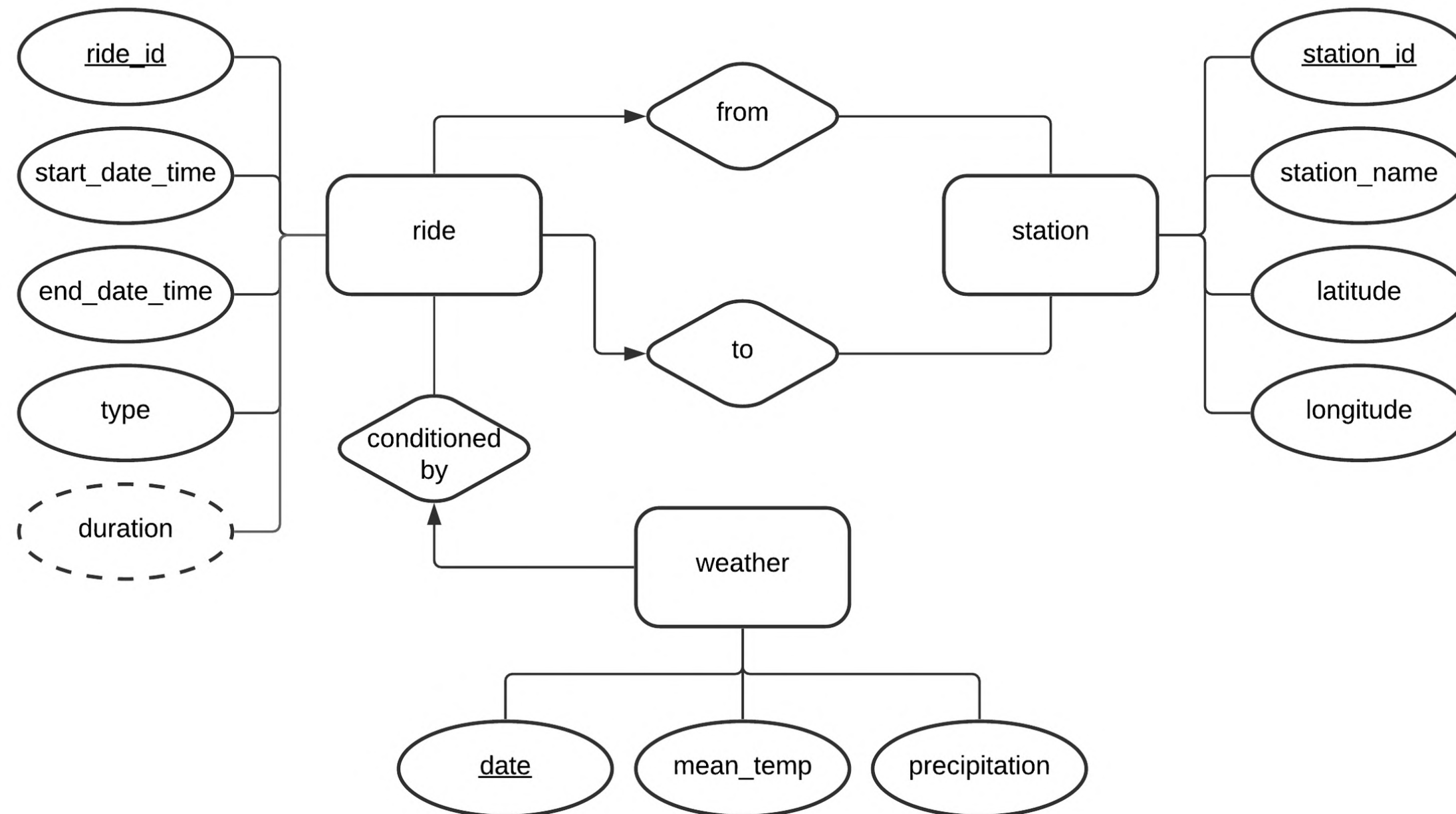
New York City Bike Sharing Database

Entity Relationships (2)
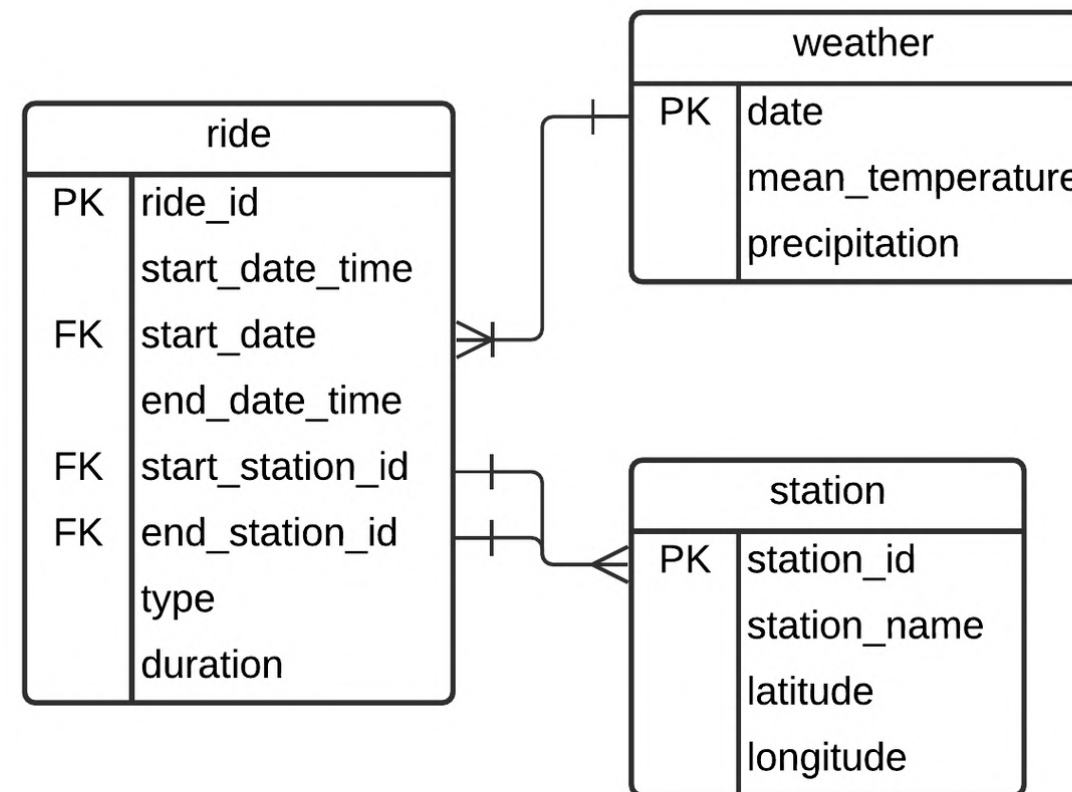
Building and *using* the database

01 **Clean data**

02 **Create database schema**

03 **Import data**

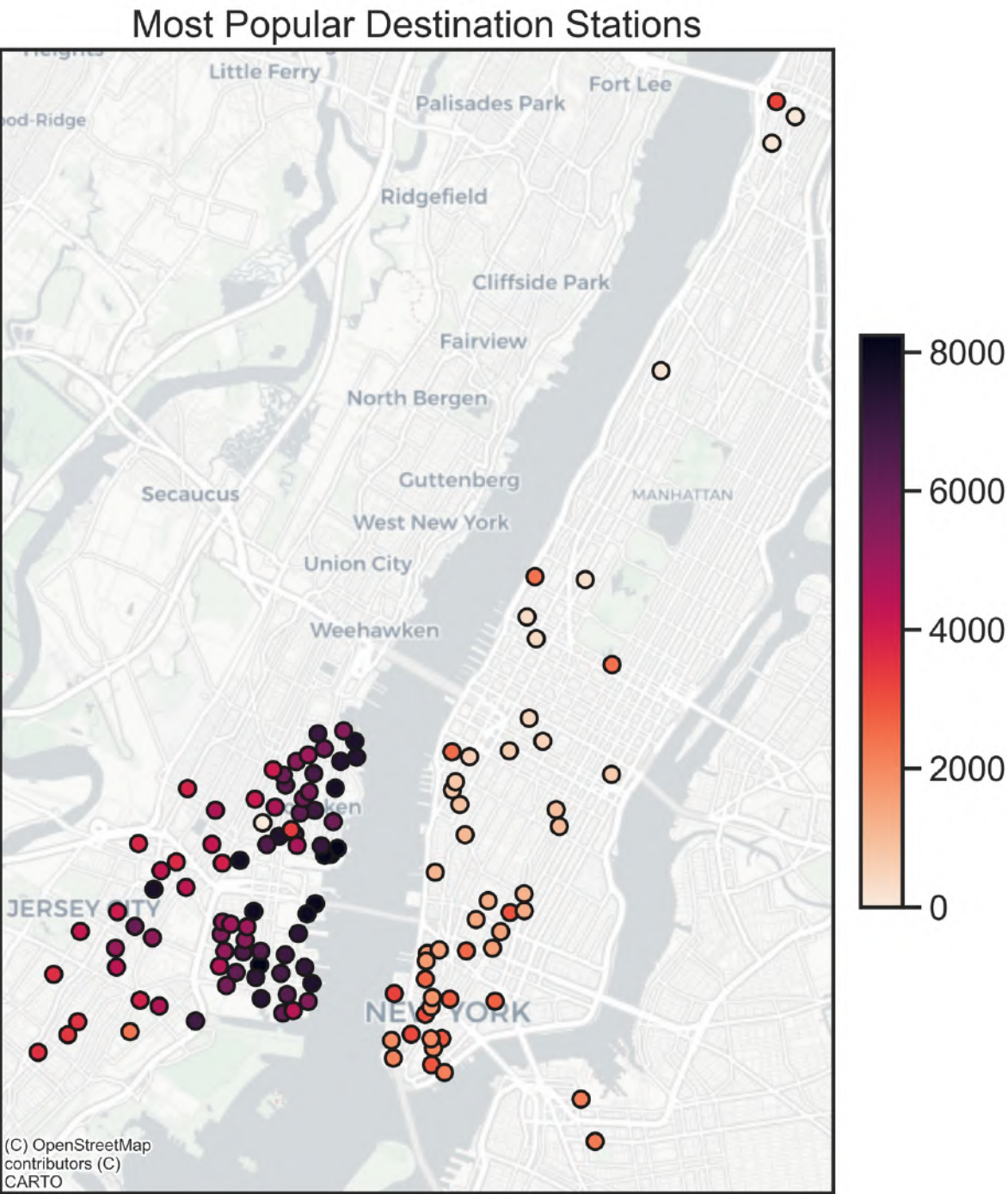04 **Query database**

NYC Ride Sharing
Station Analysis

What are the _most popular_ start stations?

station_id	station_name	latitude	longitude	ride_count
JC005	Grove St ...	40.7195861	-74.043117	4084
HB102	Hoboken T...	40.7360677	-74.029127	3687
HB103	South Wat...	40.7369822	-74.027781	3411
HB101	Hoboken T...	40.7359376	-74.030305	3203
JC008	Newport Pkwy	40.7287448	-74.032108	2445
JC066	Newport PATH	40.7272235	-74.033759	2318
JC009	Hamilton ...	40.7275960	-74.044247	2255

Most Popular Start Stations
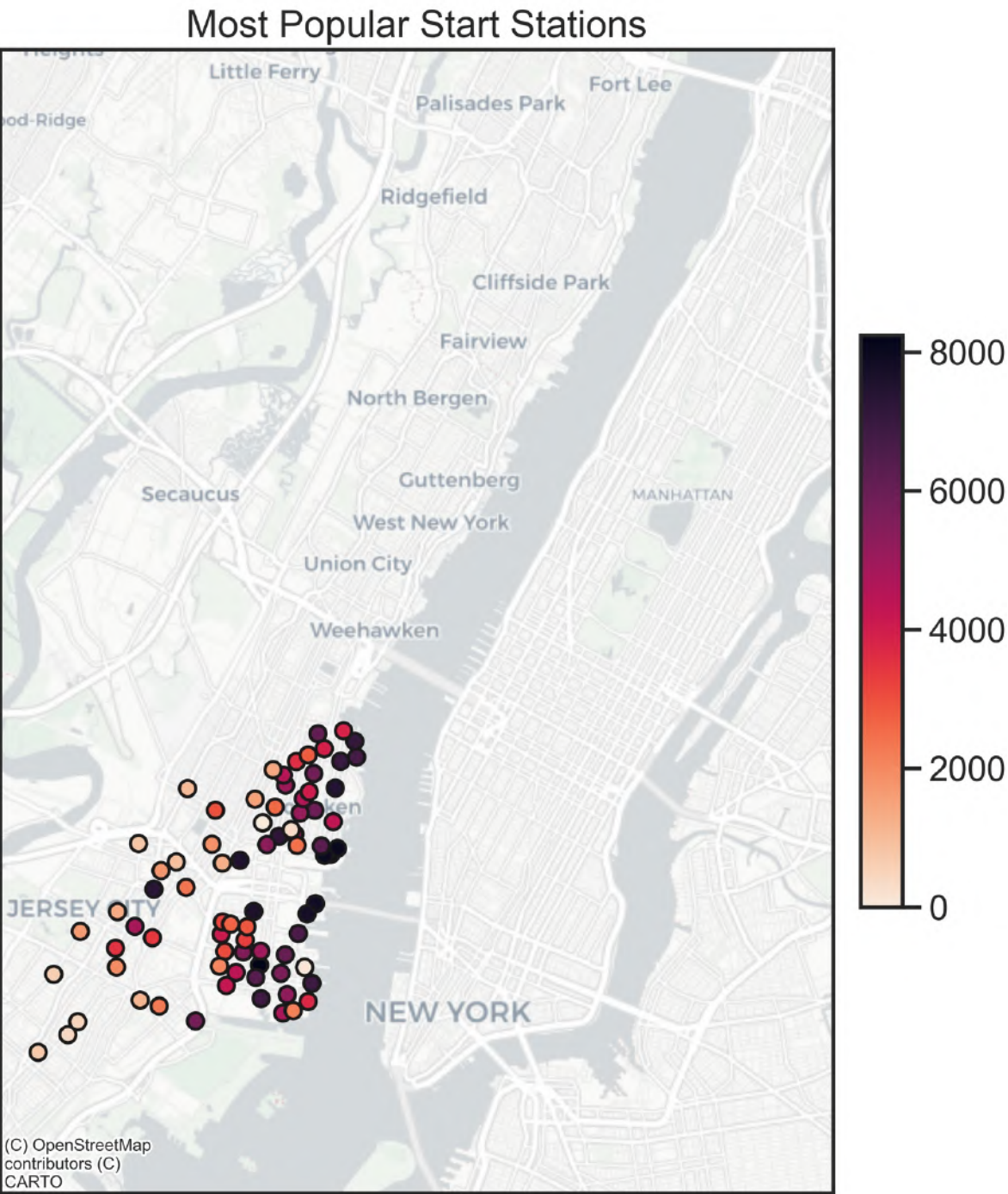
What are the *most popular* destination stations?

station_id	station_name	latitude	longitude	ride_count
JC005	Grove St ...	40.7195861	-74.043117	4156
HB102	Hoboken T...	40.7360677	-74.029127	3679
HB103	South Wat...	40.7369822	-74.027781	3447
HB101	Hoboken T...	40.7359376	-74.030305	3242
JC008	Newport Pkwy	40.7287448	-74.032108	2446
JC066	Newport PATH	40.7272235	-74.033759	2384
JC009	Hamilton ...	40.7275960	-74.044247	2276

Most Popular Destination Stations

What are the _most popular_ stations overall?

station _id	station_name	latitude	longitude	ride_count
JC005	Grove St ...	40.7195861	-74.043117	8240
HB102	Hoboken T...	40.7360677	-74.029127	7366
HB103	South Wat...	40.7369822	-74.027781	6858
HB101	Hoboken T...	40.7359376	-74.030305	6445
JC008	Newport Pkwy	40.7287448	-74.032108	4891
JC066	Newport PATH	40.7272235	-74.033759	4702
JC009	Hamilton ...	40.7275960	-74.044247	4531

Most Popular Stations
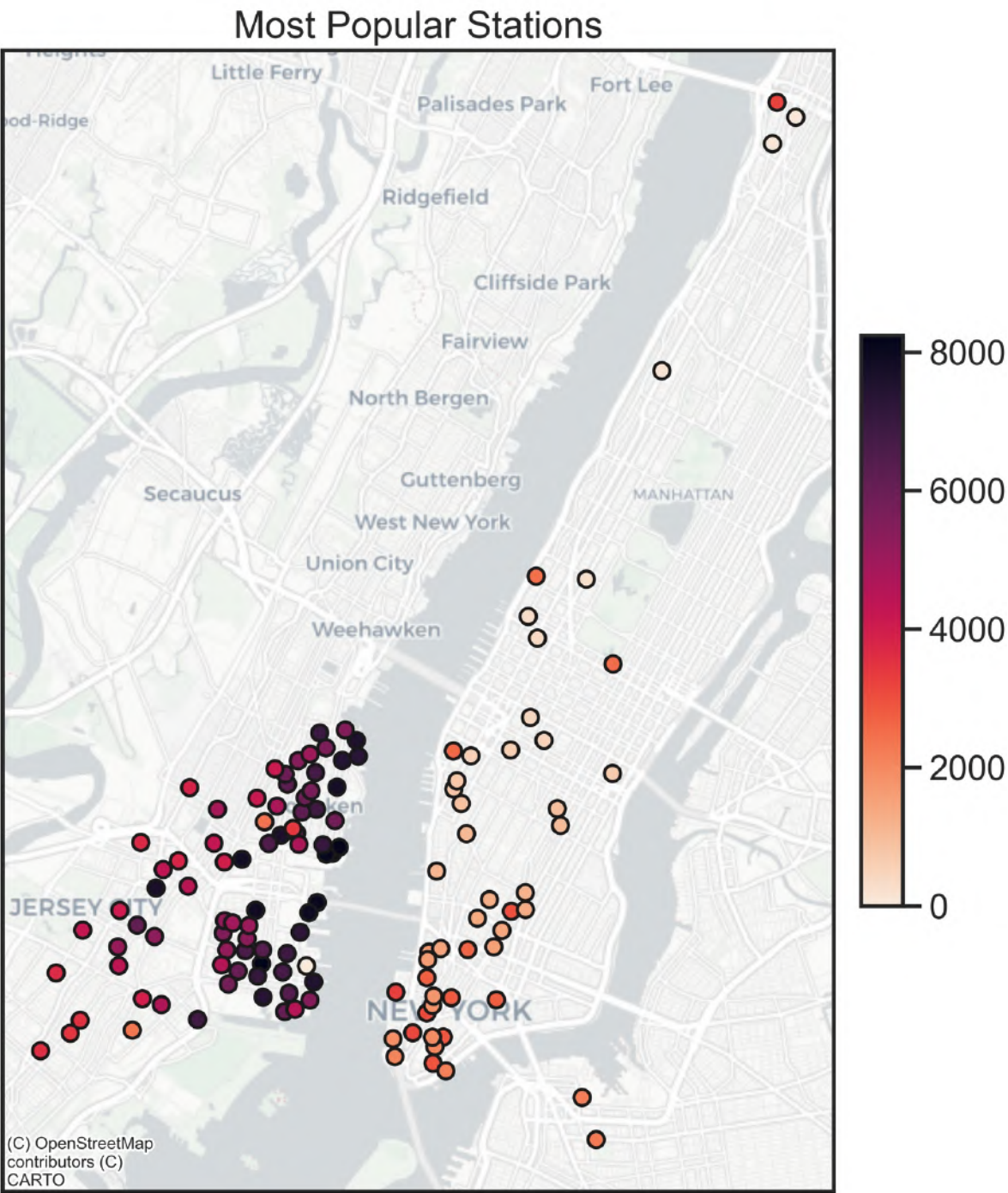
NYC Ride Sharing
Ride Analysis

Do people rent bikes *more often* on <u>weekends</u>?

weekday	mean_ride_count
3	3198.00
4	3162.60
2	3026.25
5	3018.80
6	2705.60
1	2416.75
0	2344.25

Mean Ride Count per Weekday
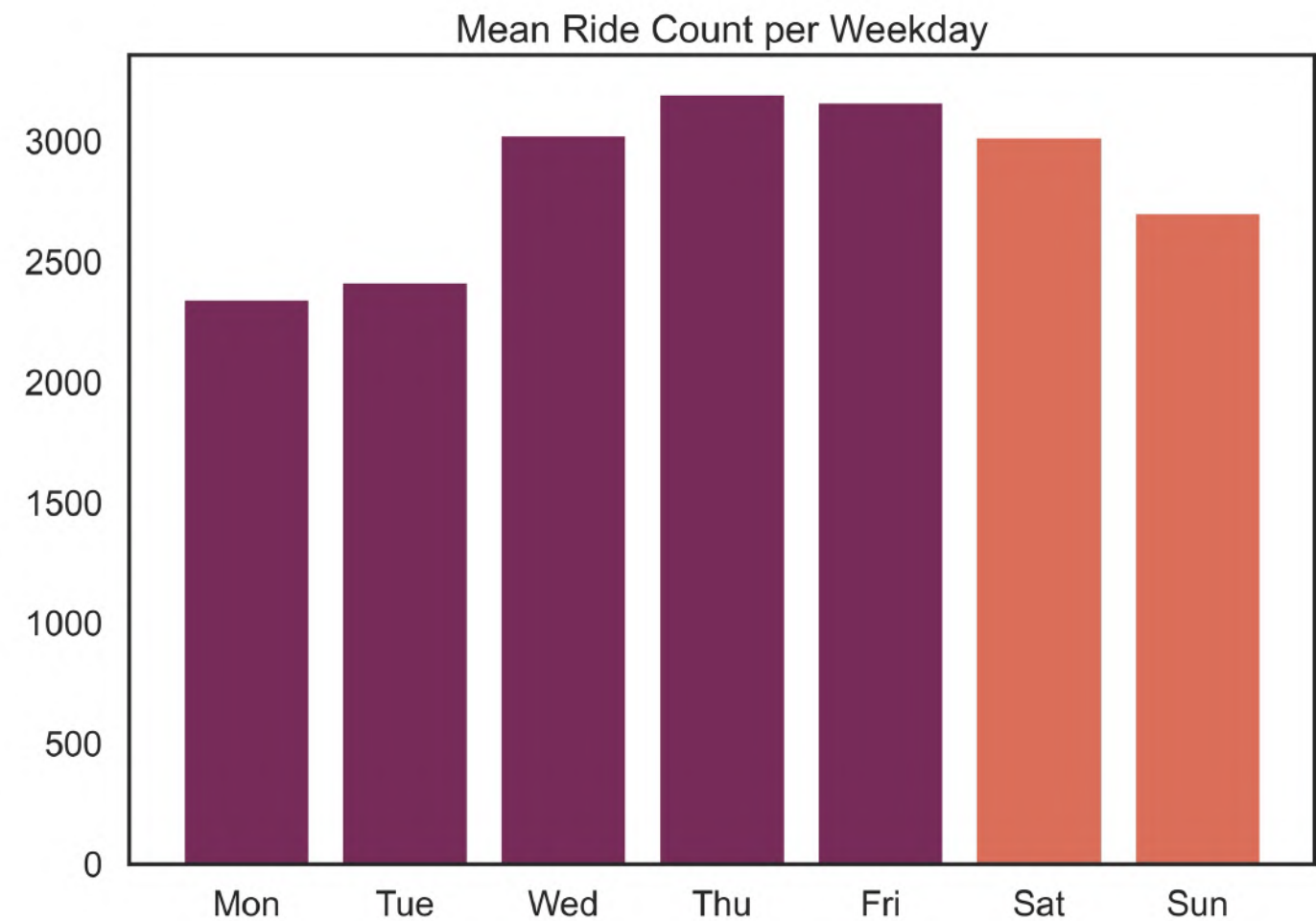
Do people rent bikes *for longer* on <u>weekends</u>?

weekday	mean_duration
6	1045.40228
5	1039.62846
4	798.78530
3	784.24461
0	715.66428
2	698.48600
1	656.49385

Mean Ride Duration per Weekday
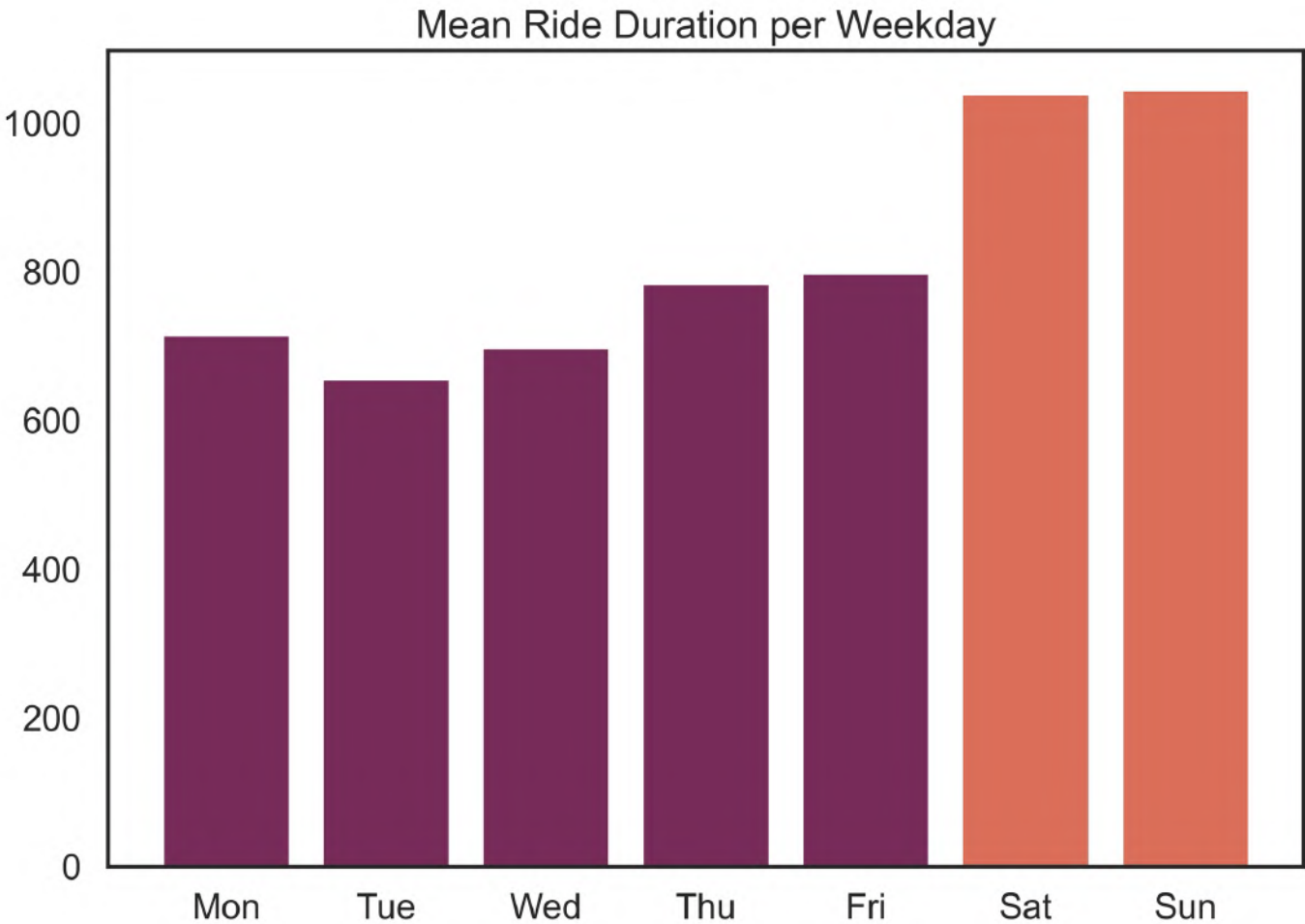
Do people rent bikes *less often* on <u>rainy days</u>?

weekday	mean_ride_count_rain	mean_ride_count_clear	mean_ride_count_difference
0	2177.00	2511.50	-334.50
1	1173.00	2831.33	-1658.33
2	2834.00	3090.33	-256.33
3	NULL	3196.00	NULL
4	2412.00	3350.25	-938.25
5	2761.00	3405.50	-644.50
6	2351.00	3237.50	-886.50

Mean Ride Count Given Precipitation
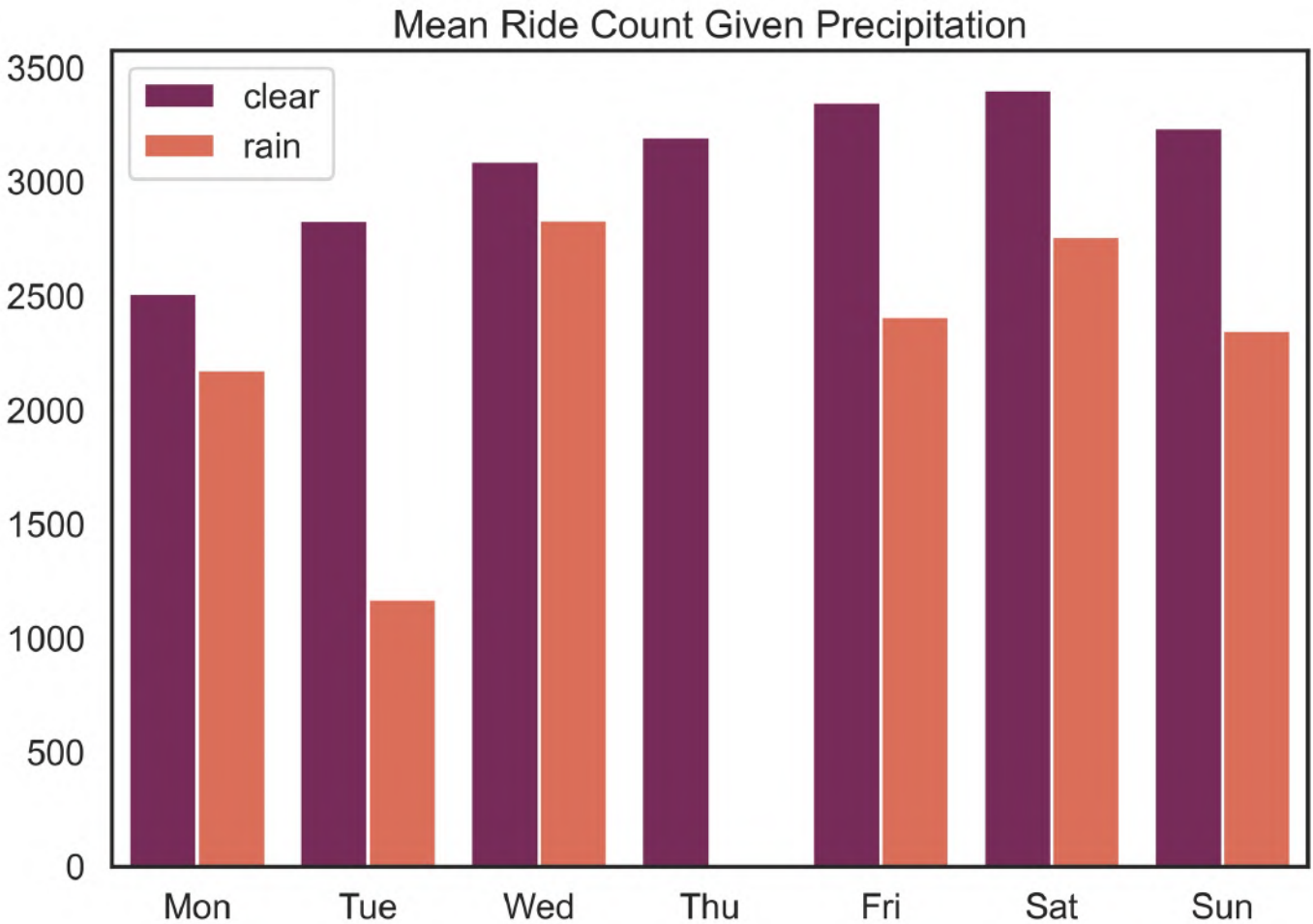
Check out our project on GitHub

Clemens S. Heithecker
github.com/clemensheithecker/nyc-bike-sharing

Thea A. Putnam
github.com/theaputnam/nyc-bike-sharing

Thank you!