

Using the CONCAT Function in SQL (BigQuery)

For this query, I used open data from Citi Bike in BigQuery, which is a public bicycle sharing system in New York. Then I used CONCAT to pull and concatenate data from different columns stored in the dataset. I needed to create strings of recognizable route names that I could count and sort. The information I needed was in the stations and trips table so I started building my query from there.

```
SELECT
usertype,
CONCAT(start_station_name, " to ", end_station_name) AS route,
COUNT(*) as num_trips,
ROUND(AVG(CAST(tripduration AS int64)/60),2) AS duration
FROM
`bigquery-public-data.new_york.citibike_trips`
GROUP BY
start_station_name, end_station_name, usertype
ORDER BY
num_trips DESC
LIMIT 10
```

I also wanted to get the average trip duration for each route. I didn't need the exact average, so I used the ROUND function to round it up. I also needed to use the GROUP BY function to group together the summary rows. And finally, I used the ORDER BY function to tell SQL how to organize this data. I only wanted the top 10 results so I also added the LIMIT function as well.

Query results [SAVE RESULTS](#) [EXPLORE DATA](#)

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row	usertype	route	num_trips	duration			
1	Customer	Central Park S & 6 Ave to Centr...	40009	50.89			
2	Customer	Grand Army Plaza & Central Park S to Grand Army Plaza & Central Park S	15234	52.99			
3	Customer	Centre St & Chambers St to Ce...	12466	35.65			
4	Subscriber	W 21 St & 6 Ave to 9 Ave & W 2...	11594	5.35			
5	Customer	Broadway & W 60 St to Broadw...	10816	52.36			
6	Subscriber	W 21 St & 6 Ave to W 22 St & 1...	10451	6.95			
7	Subscriber	E 7 St & Avenue A to Lafayette ...	9639	5.59			
8	Subscriber	West Thames St to Vesey Pl & ...	9218	6.67			
9	Subscriber	W 17 St & 8 Ave to 8 Ave & W 3...	8760	6.43			
10	Subscriber	E 43 St & Vanderbilt Ave to W 4...	8743	7.04			