Team Members
Hrithik Dhoka (hhd2023)   Anuva Sehgal (as18774)

NYC Transportation Pattern Analysis

Hive Queries

Analysis:

TRANSPORT ANALYSIS:

- *Per day of week for subway vs taxi.. Do it separately.*
  -- Subway and Taxi Analysis by Day
    - *SELECT*
    - *day_of_week,*
    - *SUM(subway_riders) as total_subway_riders,*
    - *ROUND(AVG(subway_riders), 2) as avg_subway_riders*
    - *FROM nyc_transport_sum_analysis*
    - *GROUP BY day_of_week*
    - *ORDER BY*
    - *CASE day_of_week*
    - *WHEN 'MONDAY' THEN 1*
    - *WHEN 'TUESDAY' THEN 2*
    - *WHEN 'WEDNESDAY' THEN 3*
    - *WHEN 'THURSDAY' THEN 4*
    - *WHEN 'FRIDAY' THEN 5*
    - *WHEN 'SATURDAY' THEN 6*
    - *WHEN 'SUNDAY' THEN 7*
    - *END;*

```
+-------------+-------------------+-------------------+
| day_of_week | total_subway_riders | avg_subway_riders |
+-------------+-------------------+-------------------+
| day_of_week | NULL              | NULL              |
| MONDAY      | 61547145          | 9746.18           |
| TUESDAY     | 69494787          | 11136.99          |
| WEDNESDAY   | 71084025          | 11391.67          |
| THURSDAY    | 70311714          | 11267.9           |
| FRIDAY      | 66297604          | 10624.62          |
| SATURDAY    | 44386136          | 7113.16           |
| SUNDAY      | 35488363          | 5651.01           |
+-------------+-------------------+-------------------+
```

- *Taxi Analysis by Day*
- *SELECT*
    - *day_of_week,*

- SUM(sum_taxi_passengers) as total_taxi_riders,
- ROUND(AVG(sum_taxi_passengers), 2) as avg_taxi_riders
- FROM nyc_transport_sum_analysis
- GROUP BY day_of_week
- ORDER BY
- CASE day_of_week
- WHEN 'MONDAY' THEN 1
- WHEN 'TUESDAY' THEN 2
- WHEN 'WEDNESDAY' THEN 3
- WHEN 'THURSDAY' THEN 4
- WHEN 'FRIDAY' THEN 5
- WHEN 'SATURDAY' THEN 6
- WHEN 'SUNDAY' THEN 7
- END;

```
+-------------+-------------------+------------------+
| day_of_week | total_taxi_riders | avg_taxi_riders  |
+-------------+-------------------+------------------+
| day_of_week | NULL              | NULL             |
| MONDAY      | 6242369           | 1205.32          |
| TUESDAY     | 7108615           | 1375.51          |
| WEDNESDAY   | 7522747           | 1444.46          |
| THURSDAY    | 7751937           | 1490.76          |
| FRIDAY      | 7658626           | 1472.53          |
| SATURDAY    | 7913521           | 1512.52          |
| SUNDAY      | 6712334           | 1265.28          |
+-------------+-------------------+------------------+
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- Peak hours for subway vs taxi.. Do it separately.
    - Peak Hours Subway
    - SELECT
    - transit_hour,
    - SUM(subway_riders) as total_riders,
    - ROUND(AVG(subway_riders), 2) as avg_riders
    - FROM nyc_transport_sum_analysis
    - GROUP BY transit_hour
    - ORDER BY total_riders DESC;

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```
+---------------+---------------+--------------+
| transit_hour  | total_riders  | avg_riders   |
+---------------+---------------+--------------+
| 08:00         | 39475658      | 21630.5      |
| 07:00         | 35521994      | 19464.11     |
| 17:00         | 32615497      | 17871.51     |
| 16:00         | 30675519      | 16808.5      |
| 15:00         | 28888162      | 15829.13     |
| 09:00         | 26248393      | 14382.68     |
| 18:00         | 25753274      | 14111.38     |
| 14:00         | 25099637      | 13753.23     |
| 13:00         | 21578690      | 11823.94     |
| 10:00         | 19853033      | 10878.37     |
| 12:00         | 19555055      | 10715.1      |
| 06:00         | 19333488      | 10593.69     |
| 11:00         | 18544040      | 10161.12     |
| 19:00         | 18003903      | 9865.15      |
| 20:00         | 13494798      | 7394.41      |
| 21:00         | 10853084      | 5946.9       |
| 05:00         | 9422241       | 5162.87      |
| 22:00         | 8913891       | 4884.32      |
| 23:00         | 5606511       | 3072.06      |
| 00:00         | 2884033       | 1580.29      |
| 04:00         | 2860248       | 1567.26      |
| 01:00         | 1424176       | 780.37       |
| 03:00         | 1056827       | 579.08       |
| 02:00         | 947622        | 520.67       |
| hour          | NULL          | NULL         |
+---------------+---------------+--------------+
```

-
- *Peak Hours taxi*
- *SELECT*
-     *transit_hour,*
-     *SUM(sum_taxi_passengers) as total_passengers,*
-     *ROUND(AVG(sum_taxi_passengers), 2) as avg_passengers*
- *FROM nyc_transport_sum_analysis*
- *GROUP BY transit_hour*
- *ORDER BY total_passengers DESC;*

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```
+--------------+------------------+----------------+
| transit_hour | total_passengers | avg_passengers |
+--------------+------------------+----------------+
| 18:00        | 3597769          | 2368.51        |
| 17:00        | 3453524          | 2203.91        |
| 19:00        | 3241872          | 2125.82        |
| 15:00        | 3207532          | 2081.46        |
| 16:00        | 3207239          | 1999.53        |
| 14:00        | 3098417          | 1991.27        |
| 21:00        | 2944230          | 1957.6         |
| 20:00        | 2909998          | 1942.59        |
| 13:00        | 2875135          | 1848.96        |
| 12:00        | 2766286          | 1806.85        |
| 22:00        | 2739785          | 1818.04        |
| 11:00        | 2532688          | 1639.28        |
| 10:00        | 2301625          | 1456.72        |
| 23:00        | 2158151          | 1431.13        |
| 09:00        | 2063019          | 1340.49        |
| 08:00        | 1791107          | 1180.69        |
| 00:00        | 1472894          | 985.87         |
| 07:00        | 1278369          | 836.08         |
| 01:00        | 992343           | 688.17         |
| 02:00        | 656498           | 475.38         |
| 06:00        | 636407           | 400.26         |
| 03:00        | 430559           | 314.51         |
| 04:00        | 280419           | 191.67         |
| 05:00        | 274283           | 168.38         |
| hour         | NULL             | NULL           |
+--------------+------------------+----------------+
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- *Per month analysis: taxi vs subway → percentage increase; do people prefer subway more or taxis more. For example, Christmas time should have more taxi rush.*
-
- *Borough wise comparison.. Which is the more popular subway or taxi for each borough.*
- *Yearly performance of subway and taxi usage individually, month by month.. Graph. Total number of passengers.*
- *Same with borough. ''*

PAYMENTS:

- *Spending Power: Where is taxi revenue more than subway revenue per borough and peak times? - Anuva*
- *SELECT borough, transit_hour, SUM(subway_revenue) AS total_subway_revenue, SUM(sum_taxi_fare) AS total_taxi_revenue FROM nyc_transport_sum_analysis GROUP BY borough, transit_hour HAVING SUM(sum_taxi_fare) > SUM(subway_revenue);*

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```
INFO  : Concurrency mode is disabled, not creating a lock manager
+-----------+--------------+----------------------+--------------------+
| borough   | transit_hour | total_subway_revenue | total_taxi_revenue |
+-----------+--------------+----------------------+--------------------+
| Manhattan | 00:00        | 4343303.900000002    | 21933058           |
| Manhattan | 01:00        | 1966002.8            | 15234982           |
| Manhattan | 02:00        | 1087653.7000000002   | 10374379           |
| Manhattan | 03:00        | 796896.7999999998    | 7297124            |
| Manhattan | 04:00        | 1243183.5999999994   | 6011281            |
| Manhattan | 05:00        | 3582065.5            | 5981148            |
| Manhattan | 06:00        | 9040048.199999996    | 10914302           |
| Manhattan | 09:00        | 2.520617940000001E7  | 33182102           |
| Manhattan | 10:00        | 2.022397940000001E7  | 36125726           |
| Manhattan | 11:00        | 2.1070176200000014E7 | 40298876           |
| Manhattan | 12:00        | 2.3329508200000014E7 | 44121134           |
| Manhattan | 13:00        | 2.5490185099999987E7 | 46130366           |
| Manhattan | 14:00        | 3.0841723299999997E7 | 49257737           |
| Manhattan | 15:00        | 3.88219723E7         | 50464125           |
| Manhattan | 16:00        | 4.355237980000001E7  | 53666974           |
| Manhattan | 17:00        | 4.862169289999997E7  | 57901379           |
| Manhattan | 18:00        | 3.842147939999998E7  | 58674444           |
| Manhattan | 19:00        | 2.676389700000002E7  | 50336119           |
| Manhattan | 20:00        | 1.9862085499999993E7 | 42971177           |
| Manhattan | 21:00        | 1.5860450899999995E7 | 43534494           |
| Manhattan | 22:00        | 1.3036245300000006E7 | 40887715           |
| Manhattan | 23:00        | 8504534.200000001    | 31516761           |
| Queens    | 00:00        | 1183466.8000000003   | 8599338            |
| Queens    | 01:00        | 653486.0000000001    | 3424747            |
| Queens    | 02:00        | 510681.3             | 1195510            |
| Queens    | 11:00        | 1.0454900199999997E7 | 10886905           |
| Queens    | 12:00        | 1.0495616199999994E7 | 12341331           |
| Queens    | 13:00        | 1.17257208E7         | 14539600           |
| Queens    | 14:00        | 1.3386663900000004E7 | 17923376           |
| Queens    | 15:00        | 1.4455200799999997E7 | 18583368           |
| Queens    | 16:00        | 1.4361461200000001E7 | 19852512           |
| Queens    | 17:00        | 1.4080341E7          | 17930660           |
| Queens    | 18:00        | 1.0975818500000004E7 | 16351362           |
| Queens    | 19:00        | 7883447.000000001    | 16793120           |
| Queens    | 20:00        | 6269202.6            | 16335653           |
| Queens    | 21:00        | 5347672.500000002    | 15920247           |
| Queens    | 22:00        | 4357020.8999999985   | 15777631           |
| Queens    | 23:00        | 2408763.199999999    | 15291743           |
+-----------+--------------+----------------------+--------------------+
38 rows selected (33.804 seconds)
```

- *Which boroughs are tipping more in taxis? - Anuva*
- *SELECT borough, SUM(sum_taxi_tip) AS total_taxi_tip FROM nyc_transport_sum_analysis GROUP BY borough ORDER BY total_taxi_tip DESC;*

```
INFO  : Concurrency mode is disabled, not creating a lock manager
+----------------+----------------+--------------------+
|    borough     | total_taxi_tip |   avg_taxi_tip     |
+----------------+----------------+--------------------+
| Manhattan      | 101502954      | 11608.29757548033  |
| Queens         | 30805091       | 3523.8035918554106 |
| Brooklyn       | 748718         | 85.72452484543165  |
| Bronx          | 46676          | 5.681801582471089  |
| Staten Island  | 4019           | 1.9528668610301263 |
| borough        | NULL           | NULL               |
+----------------+----------------+--------------------+
6 rows selected (62.431 seconds)
```

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- *2 anomalies:*
  - *which row gives number taxi passengers > number of subway riders*

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- *SELECT transit_date, day_of_week, transit_hour, borough, subway_riders, sum_taxi_passengers FROM nyc_transport_sum_analysis WHERE sum_taxi_passengers >= subway_riders;*

```
+--------------+-------------+--------------+-----------+---------------+--------------------+
| transit_date | day_of_week | transit_hour |  borough  | subway_riders | sum_taxi_passengers |
+--------------+-------------+--------------+-----------+---------------+--------------------+
|   2023-01-04 | WEDNESDAY   | 00:00        | Queens    | 844           | 918                |
|   2023-01-07 | SATURDAY    | 01:00        | Manhattan | 2781          | 5357               |
|   2023-01-07 | SATURDAY    | 03:00        | Manhattan | 1027          | 2277               |
|   2023-01-08 | SUNDAY      | 01:00        | Manhattan | 3261          | 6093               |
|   2023-01-08 | SUNDAY      | 03:00        | Manhattan | 1103          | 2667               |
|   2023-01-12 | THURSDAY    | 02:00        | Manhattan | 603           | 646                |
|   2023-01-13 | FRIDAY      | 02:00        | Manhattan | 815           | 992                |
|   2023-01-14 | SATURDAY    | 01:00        | Manhattan | 2737          | 5756               |
|   2023-01-14 | SATURDAY    | 03:00        | Manhattan | 1056          | 2675               |
|   2023-01-15 | SUNDAY      | 01:00        | Manhattan | 2859          | 5957               |
|   2023-01-15 | SUNDAY      | 03:00        | Manhattan | 1027          | 2788               |
|   2023-01-16 | MONDAY      | 00:00        | Manhattan | 2706          | 2769               |
|   2023-01-16 | MONDAY      | 02:00        | Manhattan | 755           | 1020               |
|   2023-01-20 | FRIDAY      | 02:00        | Manhattan | 749           | 851                |
|   2023-01-21 | SATURDAY    | 01:00        | Manhattan | 2953          | 6165               |
|   2023-01-21 | SATURDAY    | 03:00        | Manhattan | 1013          | 2807               |
|   2023-01-22 | SUNDAY      | 01:00        | Manhattan | 3108          | 6723               |
|   2023-01-22 | SUNDAY      | 03:00        | Manhattan | 1187          | 3165               |
|   2023-01-27 | FRIDAY      | 01:00        | Manhattan | 1506          | 2195               |
|   2023-01-27 | FRIDAY      | 03:00        | Manhattan | 638           | 748                |
|   2023-01-28 | SATURDAY    | 00:00        | Manhattan | 6794          | 7387               |
|   2023-01-28 | SATURDAY    | 02:00        | Manhattan | 2147          | 4749               |
|   2023-01-28 | SATURDAY    | 04:00        | Manhattan | 1153          | 1398               |
|   2023-01-29 | SUNDAY      | 00:00        | Manhattan | 6985          | 7522               |
|   2023-01-29 | SUNDAY      | 02:00        | Manhattan | 2185          | 5436               |
|   2023-01-29 | SUNDAY      | 04:00        | Manhattan | 1049          | 1700               |
|   2023-02-02 | THURSDAY    | 02:00        | Manhattan | 535           | 563                |
|   2023-02-03 | FRIDAY      | 02:00        | Manhattan | 711           | 1180               |
|   2023-02-04 | SATURDAY    | 01:00        | Manhattan | 2210          | 4212               |
|   2023-02-04 | SATURDAY    | 03:00        | Manhattan | 812           | 1868               |
|   2023-02-05 | SUNDAY      | 01:00        | Manhattan | 2505          | 5153               |
|   2023-02-05 | SUNDAY      | 03:00        | Manhattan | 1050          | 2500               |
|   2023-02-09 | THURSDAY    | 01:00        | Manhattan | 1061          | 1160               |
|   2023-02-10 | FRIDAY      | 02:00        | Manhattan | 780           | 1410               |
|   2023-02-11 | SATURDAY    | 01:00        | Manhattan | 3546          | 6242               |
|   2023-02-11 | SATURDAY    | 03:00        | Manhattan | 1101          | 3147               |
|   2023-02-12 | SUNDAY      | 01:00        | Manhattan | 3604          | 6390               |
|   2023-02-12 | SUNDAY      | 03:00        | Manhattan | 1227          | 3258               |
|   2023-02-17 | FRIDAY      | 01:00        | Manhattan | 1370          | 1971               |
|   2023-02-17 | FRIDAY      | 03:00        | Manhattan | 656           | 754                |
|   2023-02-18 | SATURDAY    | 00:00        | Manhattan | 5953          | 6179               |
|   2023-02-18 | SATURDAY    | 02:00        | Manhattan | 1740          | 4115               |
|   2023-02-18 | SATURDAY    | 04:00        | Manhattan | 1035          | 1167               |
|   2023-02-19 | SUNDAY      | 00:00        | Manhattan | 6446          | 7538               |
|   2023-02-19 | SUNDAY      | 02:00        | Manhattan | 1983          | 4616               |
|   2023-02-19 | SUNDAY      | 04:00        | Manhattan | 1023          | 1635               |
|   2023-02-20 | MONDAY      | 02:00        | Manhattan | 784           | 950                |
|   2023-02-24 | FRIDAY      | 01:00        | Manhattan | 1586          | 1971               |
|   2023-02-24 | FRIDAY      | 03:00        | Manhattan | 643           | 695                |
|   2023-02-25 | SATURDAY    | 00:00        | Manhattan | 5460          | 7253               |
|   2023-02-25 | SATURDAY    | 02:00        | Manhattan | 1436          | 4571               |
|   2023-02-25 | SATURDAY    | 04:00        | Manhattan | 986           | 1392               |
|   2023-02-26 | SUNDAY      | 00:00        | Manhattan | 4958          | 7263               |
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|   2023-12-01 | FRIDAY      | 02:00        | Manhattan | 972           | 1747               |
|   2023-12-02 | SATURDAY    | 01:00        | Manhattan | 3499          | 6999               |
|   2023-12-02 | SATURDAY    | 03:00        | Manhattan | 1060          | 3110               |
|   2023-12-03 | SUNDAY      | 01:00        | Manhattan | 4804          | 7651               |
|   2023-12-03 | SUNDAY      | 03:00        | Manhattan | 1421          | 3718               |
|   2023-12-07 | THURSDAY    | 01:00        | Manhattan | 1423          | 1857               |
|   2023-12-08 | FRIDAY      | 01:00        | Manhattan | 1833          | 3659               |
|   2023-12-08 | FRIDAY      | 03:00        | Manhattan | 749           | 1127               |
|   2023-12-09 | SATURDAY    | 00:00        | Manhattan | 8092          | 9453               |
|   2023-12-09 | SATURDAY    | 02:00        | Manhattan | 2190          | 5495               |
|   2023-12-09 | SATURDAY    | 04:00        | Manhattan | 1194          | 1498               |
|   2023-12-10 | SUNDAY      | 01:00        | Manhattan | 4548          | 7982               |
|   2023-12-10 | SUNDAY      | 03:00        | Manhattan | 1394          | 3843               |
|   2023-12-14 | THURSDAY    | 01:00        | Manhattan | 1588          | 2236               |
|   2023-12-14 | THURSDAY    | 03:00        | Manhattan | 657           | 660                |
|   2023-12-15 | FRIDAY      | 01:00        | Manhattan | 2232          | 4457               |
|   2023-12-15 | FRIDAY      | 03:00        | Manhattan | 820           | 1241               |
|   2023-12-16 | SATURDAY    | 00:00        | Manhattan | 8427          | 9727               |
|   2023-12-16 | SATURDAY    | 02:00        | Manhattan | 2223          | 5558               |
|   2023-12-16 | SATURDAY    | 04:00        | Manhattan | 1262          | 1929               |
|   2023-12-17 | SUNDAY      | 00:00        | Manhattan | 8196          | 9490               |
|   2023-12-17 | SUNDAY      | 02:00        | Manhattan | 2205          | 6618               |
|   2023-12-17 | SUNDAY      | 04:00        | Manhattan | 1202          | 2142               |
|   2023-12-22 | FRIDAY      | 01:00        | Manhattan | 1801          | 2238               |
|   2023-12-22 | FRIDAY      | 03:00        | Manhattan | 757           | 914                |
|   2023-12-23 | SATURDAY    | 02:00        | Manhattan | 1415          | 2003               |
|   2023-12-23 | SATURDAY    | 04:00        | Manhattan | 1066          | 1162               |
|   2023-12-24 | SUNDAY      | 02:00        | Manhattan | 1066          | 1210               |
|   2023-12-25 | MONDAY      | 01:00        | Manhattan | 1193          | 1204               |
|   2023-12-29 | FRIDAY      | 02:00        | Manhattan | 921           | 1144               |
|   2023-12-30 | SATURDAY    | 02:00        | Manhattan | 1514          | 2576               |
|   2023-12-31 | SUNDAY      | 02:00        | Manhattan | 1603          | 2191               |
+--------------+-------------+--------------+-----------+---------------+--------------------+
753 rows selected (23.575 seconds)
```

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- *Revenue from taxi > revenue from subway*
- *SELECT transit_date, day_of_week, transit_hour, borough, subway_revenue, sum_taxi_fare FROM nyc_transport_sum_analysis WHERE sum_taxi_fare >=*

subway_revenue;
Getting 13,000 rows.. To extract further meaningful insights from this let's highlight the extreme difference in revenue TOP 50:

- *SELECT transit_date, borough, transit_hour, subway_revenue, sum_taxi_fare, (sum_taxi_fare - subway_revenue) AS revenue_difference FROM nyc_transport_sum_analysis WHERE sum_taxi_fare >= subway_revenue ORDER BY revenue_difference DESC LIMIT 50;*

```
INFO  : Concurrency mode is disabled, not creating a lock manager
+--------------+-----------+--------------+----------------+---------------+--------------------+
| transit_date |  borough  | transit_hour | subway_revenue | sum_taxi_fare | revenue_difference |
+--------------+-----------+--------------+----------------+---------------+--------------------+
|   2023-06-12 | Manhattan | 13:00        |        65189.1 |        506425 |           441235.9 |
|   2023-09-02 | Manhattan | 15:00        |        74071.8 |        282547 |           208475.2 |
|   2023-09-05 | Manhattan | 10:00        |        61430.7 |        256379 |           194948.3 |
|   2023-12-14 | Manhattan | 22:00        |        51582.3 |        230773 |           179190.7 |
|   2023-12-13 | Manhattan | 21:00        |        58020.3 |        233850 |           175829.7 |
|   2023-12-14 | Manhattan | 23:00        |        30998.1 |        205737 |           174738.9 |
|   2023-12-13 | Manhattan | 22:00        |        43581.2 |        215063 |           171481.8 |
|   2023-11-05 | Manhattan | 01:00        |        16933.1 |        187239 |           170305.9 |
|   2023-12-14 | Manhattan | 21:00        |        64319.1 |        229195 |           164875.9 |
|   2023-12-07 | Manhattan | 22:00        |        46985.8 |        207293 |           160307.2 |
|   2023-12-16 | Manhattan | 23:00        |        36682.1 |        195870 |           159187.9 |
|   2023-12-16 | Manhattan | 00:00        |        24438.3 |        181216 |           156777.7 |
|   2023-10-28 | Manhattan | 23:00        |        43140.4 |        199332 |           156191.6 |
|   2023-12-15 | Manhattan | 23:00        |        37253.4 |        190958 |           153704.6 |
|   2023-12-10 | Manhattan | 00:00        |        24774.7 |        175312 |           150537.3 |
|   2023-12-09 | Manhattan | 23:00        |        40405.7 |        189642 |           149236.3 |
|   2023-12-08 | Manhattan | 23:00        |        35896.2 |        184254 |           148357.8 |
|   2023-12-02 | Manhattan | 23:00        |        38277.1 |        186307 |           148029.9 |
|   2023-12-06 | Manhattan | 22:00        |        41603.4 |        189466 |           147862.6 |
|   2023-09-29 | Manhattan | 17:00        |        50651.4 |        198481 |           147829.6 |
|   2023-11-09 | Manhattan | 22:00        |        41011.8 |        188146 |           147134.2 |
|   2023-12-06 | Manhattan | 21:00        |        59299.2 |        204485 |           145185.8 |
|   2023-11-02 | Manhattan | 22:00        |        39039.8 |        182918 |           143878.2 |
|   2023-12-14 | Manhattan | 20:00        |        72824.8 |        216420 |           143595.2 |
|   2023-11-16 | Manhattan | 22:00        |        39788.0 |        183137 |           143349.0 |
|   2023-11-15 | Manhattan | 21:00        |        49607.4 |        192313 |           142705.6 |
|   2023-12-09 | Manhattan | 00:00        |        23466.8 |        165876 |           142409.2 |
|   2023-05-24 | Manhattan | 19:00        |        91735.7 |        233073 |           141337.3 |
|   2023-12-14 | Manhattan | 19:00        |        97451.6 |        238712 |           141260.4 |
|   2023-12-17 | Manhattan | 00:00        |        23768.4 |        164979 |           141210.6 |
|   2023-12-07 | Manhattan | 21:00        |        61993.3 |        203168 |           141174.7 |
|   2023-11-30 | Manhattan | 22:00        |        41139.4 |        181494 |           140354.6 |
|   2023-12-12 | Manhattan | 21:00        |        57344.6 |        197012 |           139667.4 |
|   2023-12-12 | Manhattan | 22:00        |        40669.6 |        180034 |           139364.4 |
|   2023-10-28 | Manhattan | 22:00        |        51988.3 |        189502 |           137513.7 |
|   2023-12-01 | Manhattan | 18:00        |       129635.8 |        267110 |           137474.2 |
|   2023-11-09 | Manhattan | 21:00        |        56634.1 |        192898 |           136263.9 |
|   2023-10-27 | Manhattan | 23:00        |        41243.8 |        177505 |           136261.2 |
|   2023-09-28 | Manhattan | 22:00        |        37517.3 |        173671 |           136153.7 |
|   2023-11-18 | Manhattan | 23:00        |        30821.2 |        166359 |           135537.8 |
|   2023-10-29 | Manhattan | 00:00        |        27958.9 |        163109 |           135150.1 |
|   2023-11-16 | Manhattan | 21:00        |        56013.5 |        191142 |           135128.5 |
|   2023-12-07 | Manhattan | 23:00        |        27048.3 |        161745 |           134696.7 |
|   2023-11-11 | Manhattan | 23:00        |        32683.0 |        167377 |           134694.0 |
|   2023-09-29 | Manhattan | 18:00        |        54276.4 |        188815 |           134538.6 |
|   2023-11-15 | Manhattan | 22:00        |        35867.2 |        170145 |           134277.8 |
|   2023-12-13 | Manhattan | 20:00        |        67114.7 |        201133 |           134018.3 |
|   2023-10-26 | Manhattan | 22:00        |        47136.6 |        180914 |           133777.4 |
|   2023-11-08 | Manhattan | 21:00        |        50413.6 |        184187 |           133773.4 |
|   2023-11-02 | Manhattan | 21:00        |        56100.5 |        189715 |           133614.5 |
+--------------+-----------+--------------+----------------+---------------+--------------------+
50 rows selected (32.853 seconds)
```

-
- *Which borough has the highest disparity between people taking subways vs taking taxis:*
- *SELECT borough, COUNT(*) AS row_count*
- *. . . . .> FROM nyc_transport_sum_analysis*
- *. . . . .> WHERE sum_taxi_fare >= subway_revenue*
- *. . . . .> GROUP BY borough*
- *. . . . .> ORDER BY row_count DESC;*

```
INFO   : Concurrency mode is disable
+---------------+-----------+
|    borough    | row_count |
+---------------+-----------+
| Manhattan     | 8020      |
| Queens        | 5448      |
| Staten Island | 84        |
| Brooklyn      | 1         |
+---------------+-----------+
4 rows selected (62.401 seconds)
```

- SELECT MONTH(CAST(transit_date AS DATE)) AS month, COUNT(*) AS row_count
- FROM nyc_transport_sum_analysis
- WHERE sum_taxi_fare >= subway_revenue
- GROUP BY MONTH(CAST(transit_date AS DATE))
- ORDER BY row_count DESC;

```
INFO   : OK
INFO   : Concurrency mode is disab
+--------+-----------+
| month  | row_count |
+--------+-----------+
| 10     | 1190      |
| 5      | 1188      |
| 7      | 1178      |
| 12     | 1164      |
| 6      | 1160      |
| 3      | 1159      |
| 8      | 1153      |
| 4      | 1144      |
| 11     | 1136      |
| 1      | 1069      |
| 9      | 1026      |
| 2      | 986       |
+--------+-----------+
12 rows selected (63.326 seconds)
```

SELECT borough, transit_hour,

. . . .>   SUM(subway_riders) AS total_subway_riders,

. . . .>   SUM(sum_taxi_passengers) AS total_taxi_passengers

. . . .> FROM nyc_transport_sum_analysis

Team Members

Hrithik Dhoka (hhd2023)   Anuva Sehgal (as18774)

. . . .> GROUP BY borough, transit_hour

. . . .> HAVING SUM(sum_taxi_passengers) > SUM(subway_riders);

```
+-----------+--------------+---------------------+------------------------+
| borough   | transit_hour | total_subway_riders | total_taxi_passengers  |
+-----------+--------------+---------------------+------------------------+
| Manhattan | 01:00        | 677932              | 907455                 |
| Manhattan | 02:00        | 375053              | 619465                 |
| Manhattan | 03:00        | 274792              | 406390                 |
+-----------+--------------+---------------------+------------------------+
3 rows selected (29.536 seconds)
```