### Solving analytical queries on Redshift Cluster

Here, you have to write the query used for solving the question and the screenshots of the table which is outputted after the query is run on the AWS Redshift Query editor UI.

1. **Top 10 ATMs where most transactions are in the ’inactive’ state**

<Query>

SELECT

a.atm\_number,

a.atm\_manufacturer,

l.location,

count(f.trans\_id) as total\_transaction\_count,

SUM(CASE WHEN f.atm\_status = 'Inactive'

THEN 1

ELSE 0

END) as inactive\_count,

(inactive\_count/total\_transaction\_count)\*100 as inactive\_count\_percent

FROM

etl\_atm\_data.DIM\_ATM as a,

etl\_atm\_data.FACT\_ATM\_TRANS as f,

etl\_atm\_data.DIM\_LOCATION as l

WHERE

a.atm\_id = f.atm\_id AND a.atm\_location\_id = l.location\_id

GROUP BY

a.atm\_number,

a.atm\_manufacturer,

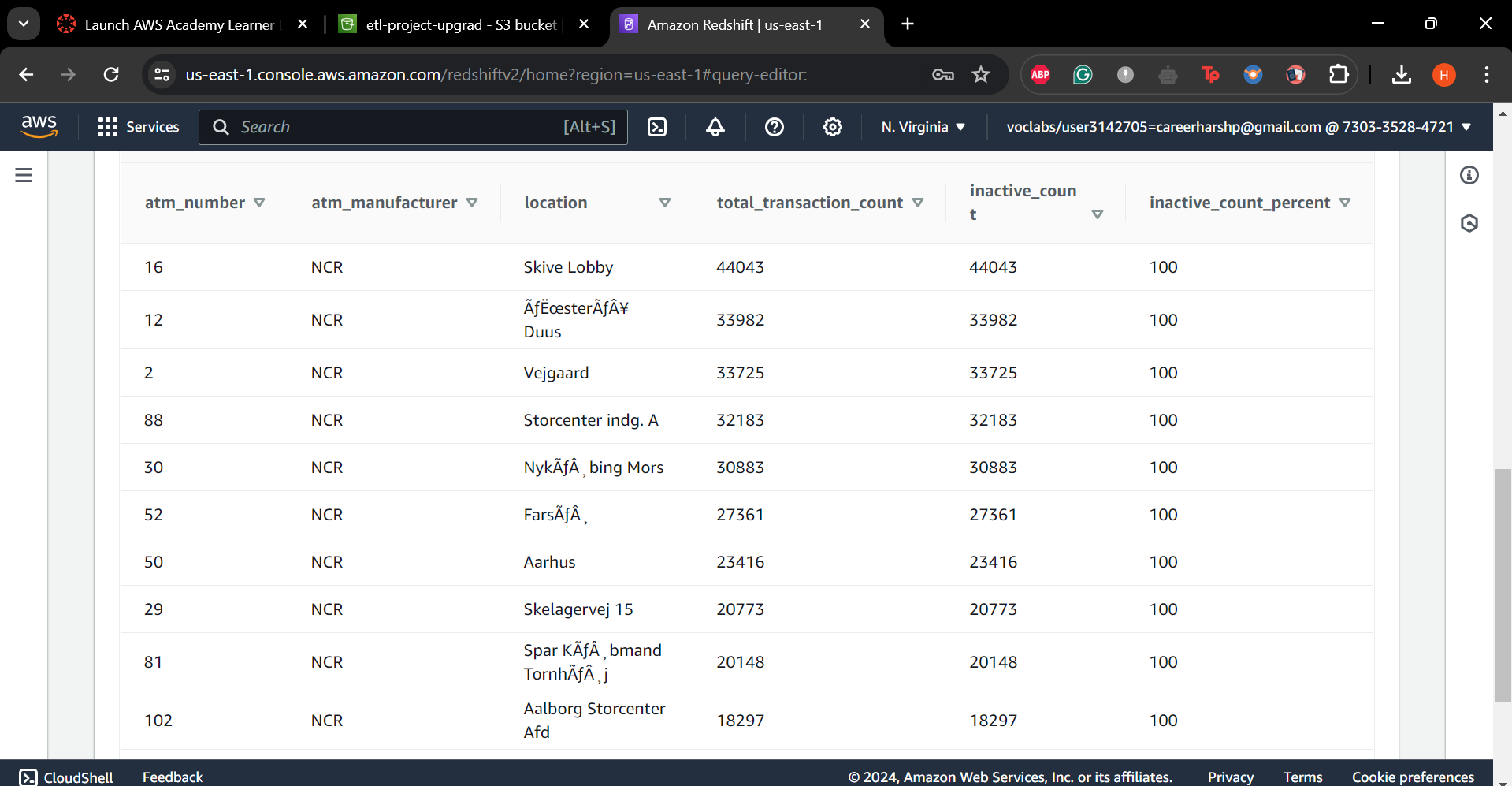
l.location

ORDER BY

inactive\_count DESC

LIMIT 10;

<Screenshot of the resultant table>



1. **Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions**

<Query>

WITH failed\_atm AS

(SELECT

weather\_main,

count(trans\_id) as total\_transaction\_count,

SUM(CASE WHEN atm\_status = 'Inactive'

THEN 1

ELSE 0

END) as inactive\_count

FROM

etl\_atm\_data.FACT\_ATM\_TRANS

WHERE

weather\_main != ' '

GROUP BY

weather\_main)

SELECT \*,

ROUND(CAST(inactive\_count AS numeric(10,2))/ total\_transaction\_count\*100,2) AS inactive\_count\_percent

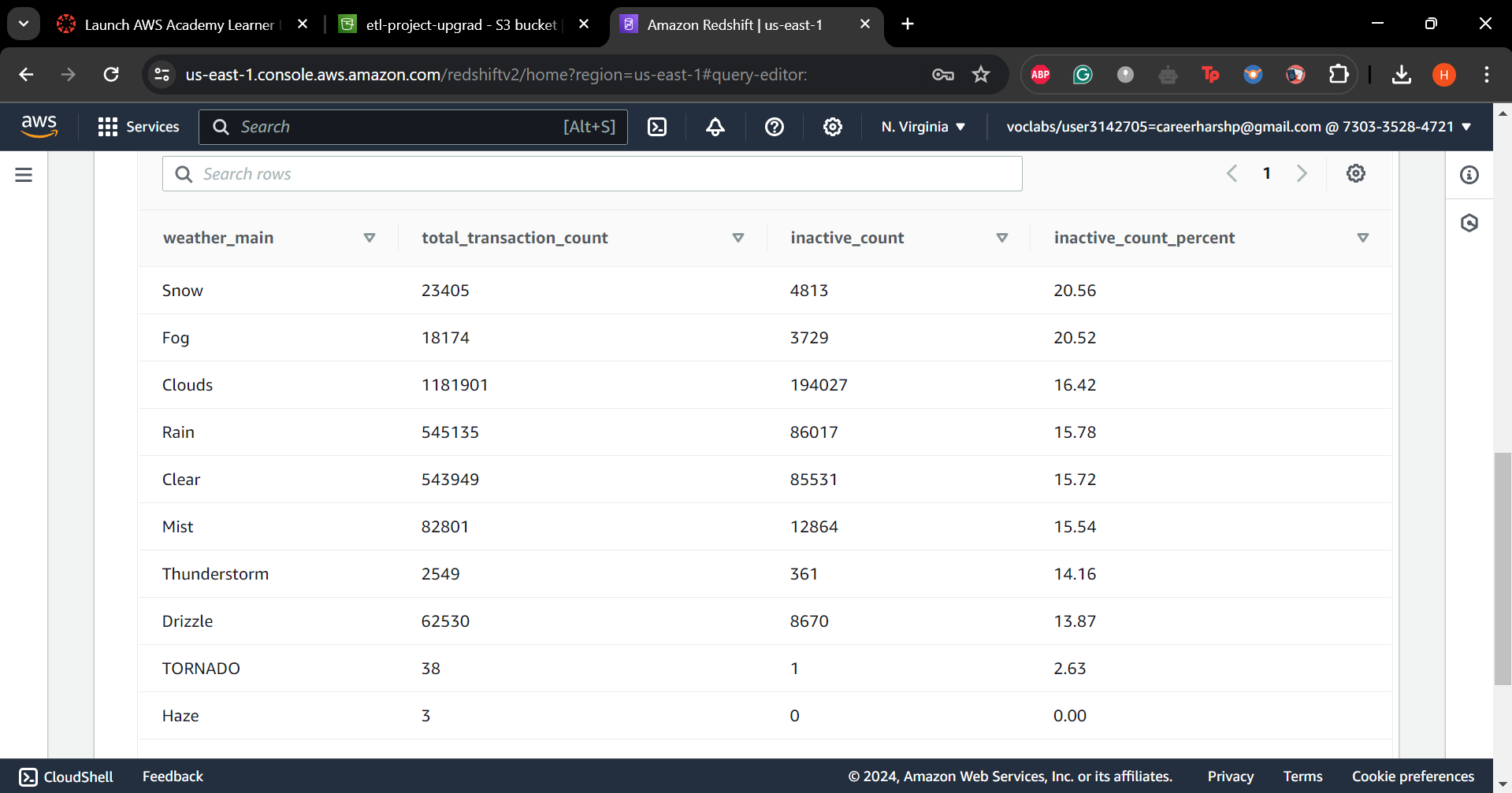
FROM

failed\_atm

ORDER BY

inactive\_count\_percent DESC;

<Screenshot of the resultant table>



1. **Top 10 ATMs with the most number of transactions throughout the year**

<Query>

SELECT

a.atm\_number,

a.atm\_manufacturer,

l.location,

count(f.trans\_id) as total\_transaction\_count

FROM

etl\_atm\_data.DIM\_ATM as a,

etl\_atm\_data.FACT\_ATM\_TRANS as f,

etl\_atm\_data.DIM\_LOCATION as l

WHERE

a.atm\_id = f.atm\_id AND a.atm\_location\_id = l.location\_id

GROUP BY

a.atm\_number,

a.atm\_manufacturer,

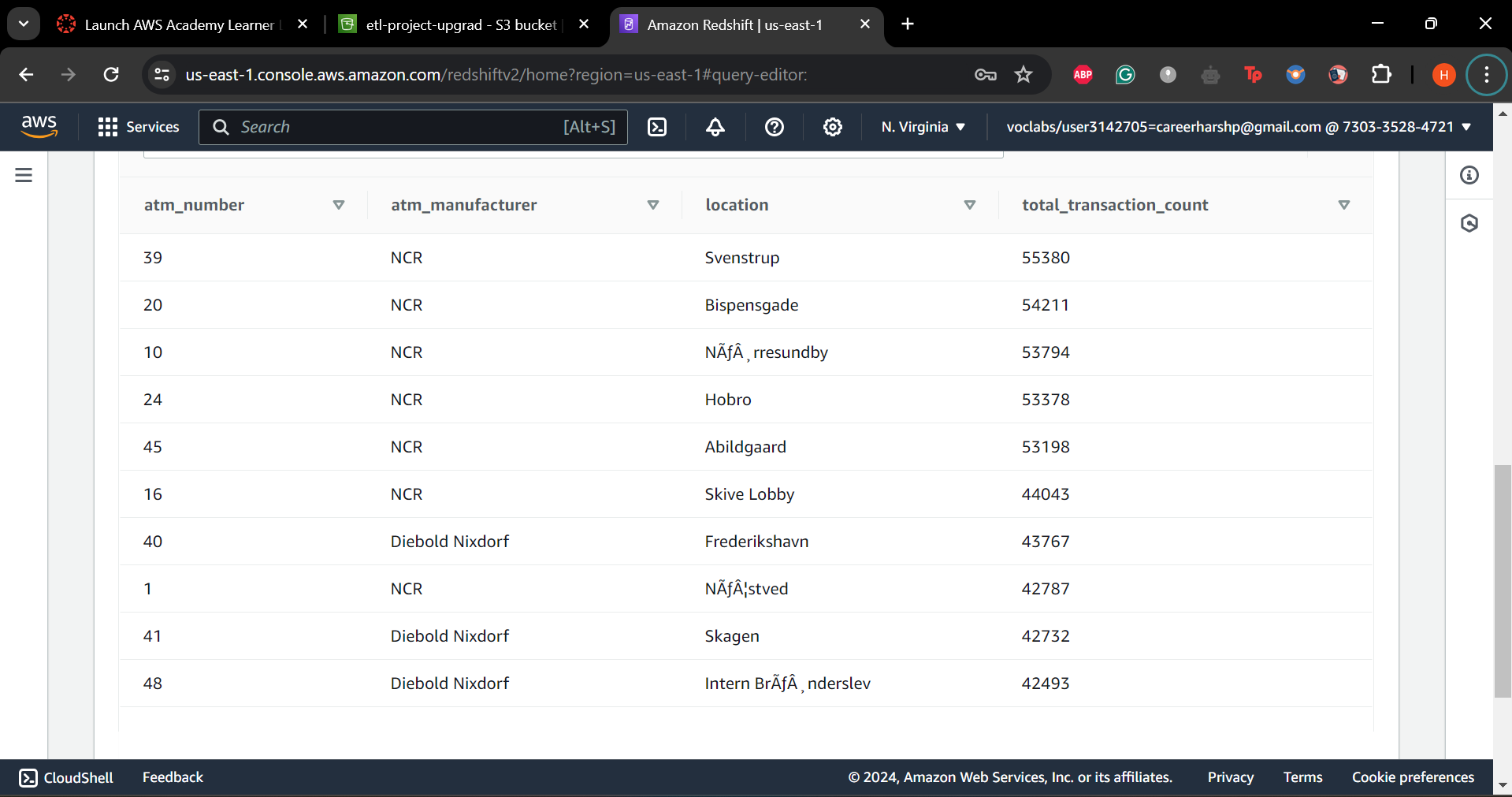
l.location

ORDER BY

total\_transaction\_count DESC

LIMIT 10;

<Screenshot of the resultant table>



1. **Number of overall ATM transactions going inactive per month for each month**

<Query>

WITH failed\_atm\_monthly AS (

SELECT

d.year,

d.month,

count(f.trans\_id) as total\_transaction\_count,

SUM(CASE WHEN f.atm\_status = 'Inactive'

THEN 1

ELSE 0

END) as inactive\_count

FROM

etl\_atm\_data.FACT\_ATM\_TRANS as f,

etl\_atm\_data.DIM\_DATE as d

WHERE

f.date\_id = d.date\_id

GROUP BY

d.year,

d.month)

SELECT \*,

ROUND(CAST(inactive\_count AS numeric(10,2))/ total\_transaction\_count\*100,2) AS inactive\_count\_percent

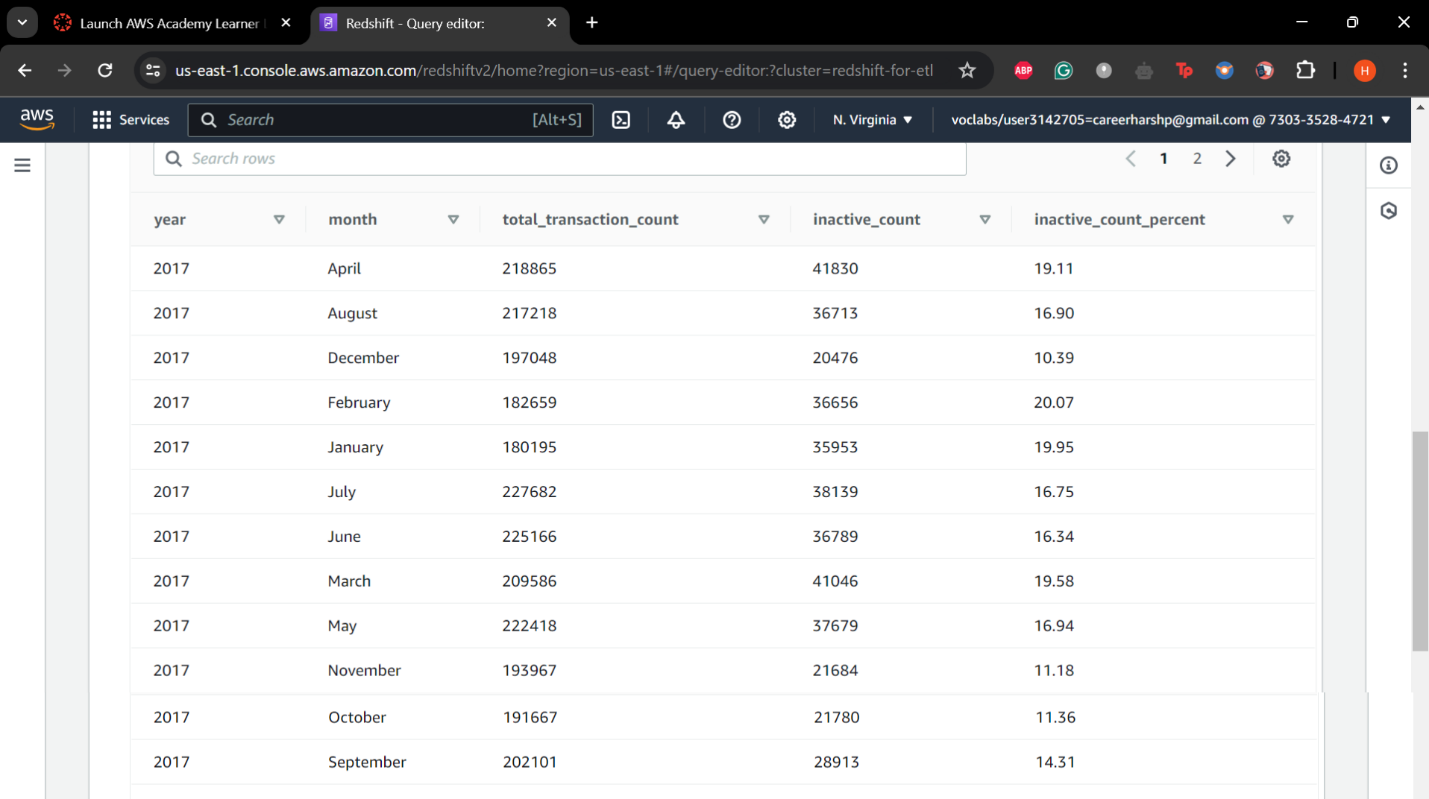
FROM

failed\_atm\_monthly

ORDER BY

month;

<Screenshot of the resultant table>



1. **Top 10 ATMs with the highest total withdrawn amount throughout the year**

<Query>

<Screenshot of the resultant table>

1. **Number of failed ATM transactions across various card types**

<Query>

<Screenshot of the resultant table>

1. **Number of transactions happening on an ATM on weekdays and on weekends throughout the year. Order this by the ATM\_number, ATM\_manufacturer, location, weekend\_flag and then total\_transaction\_count**

<Query>

<Screenshot of the resultant table>

1. **Most active day in each ATMs from location "Vejgaard"**

<Query>

<Screenshot of the resultant table>