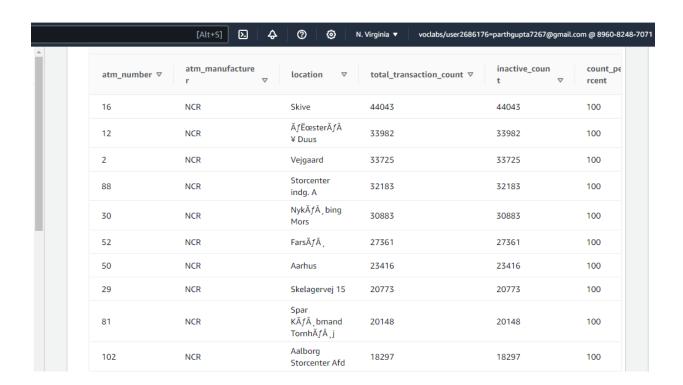




Solving analytical queries on Redshift Cluster

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

```
select
a.atm_number , a.atm_manufacturer , l.location ,
count(t.trans_id) AS total_transaction_count ,
sum(case when t.atm_status = 'Inactive' then 1 else 0 end) AS inactive_count,
(inactive_count/total_transaction_count)*100 as count_percent
from
atm_etl_db.transaction_fact t ,
atm_etl_db.atm_dimension a ,
atm_etl_db.loc_dimension l
where t.atm_id = a.atm_id and a.atm_loc_id = l.loc_id
group by 1,2,3
order by 5 desc
limit 10;
```

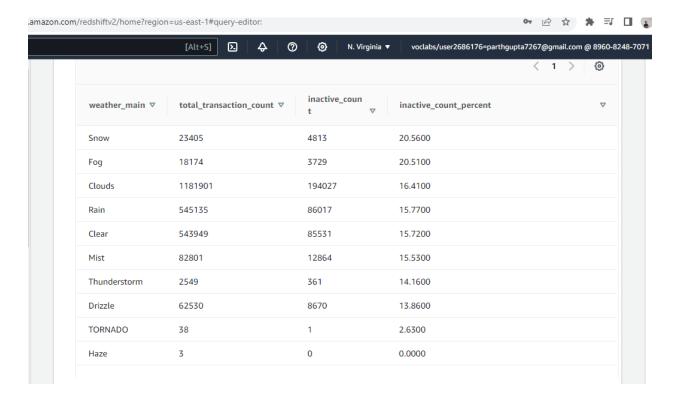






2. Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions.

select
t.weather_main,
count(t.trans_id) AS total_transaction_count,
sum(case when t.atm_status = 'Inactive' then 1 else 0 end) AS inactive_count,
case when coalesce(inactive_count,0) = 0 then 0.0000
else trunc((cast(inactive_count AS
numeric(10,4))/total_transaction_count)*100,2) end as inactive_count_percent
from
atm_etl_db.transaction_fact t
where t.weather_main != "
group by 1
order by 4 desc
limit 10;

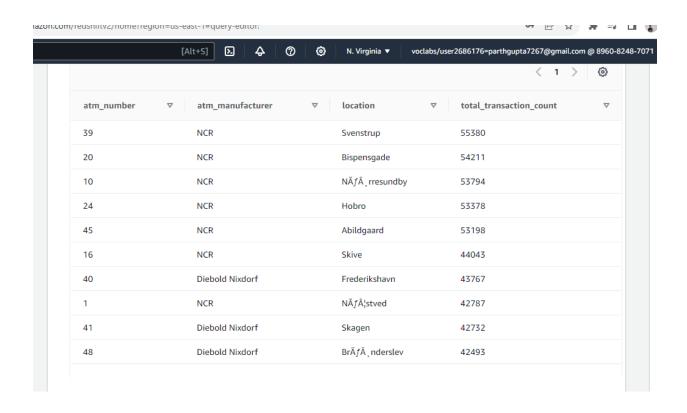






3. Top 10 ATMs with the most number of transactions throughout the year

```
select
a.atm_number , a.atm_manufacturer , l.location ,
count(t.trans_id) as total_transaction_count
from
atm_etl_db.transaction_fact t ,
atm_etl_db.atm_dimension a ,
atm_etl_db.loc_dimension l
where t.atm_id = a.atm_id and a.atm_loc_id = l.loc_id
group by 1,2,3
order by 4 desc
limit 10;
```

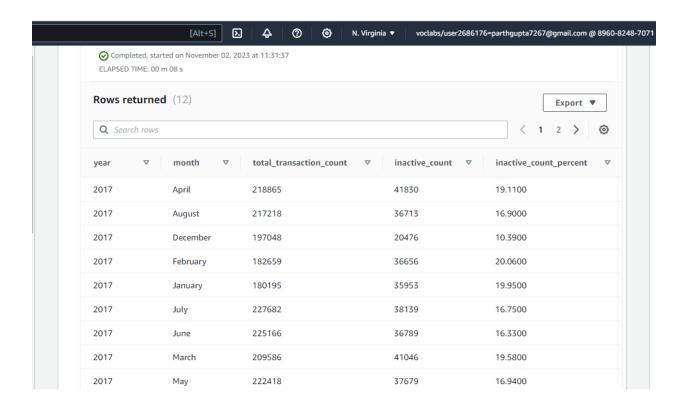






4. Number of overall ATM transactions going inactive per month for each month

select
d.year, d.month,
count(t.trans_id) AS total_transaction_count,
sum(case when t.atm_status = 'Inactive' then 1 else 0 end) AS inactive_count,
case when coalesce(inactive_count,0) = 0 then 0.0000
else trunc((cast(inactive_count AS
numeric(10,4))/total_transaction_count)*100,2) end as inactive_count_percent
from
atm_etl_db.transaction_fact t inner join atm_etl_db.date_dimension d on t.date_id =
d.date_id
group by 1,2
order by 1,2;

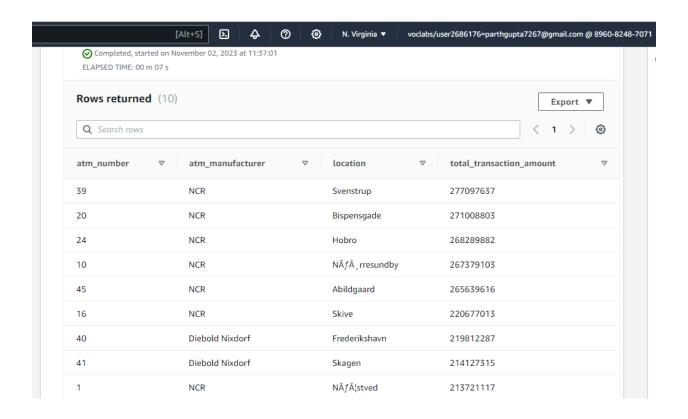






5. Top 10 ATMs with the highest total withdrawn amount throughout the year

```
select
a.atm_number , a.atm_manufacturer , l.location ,
sum(t.transaction_amount)as total_transaction_amount
from
atm_etl_db.transaction_fact t ,
atm_etl_db.atm_dimension a ,
atm_etl_db.loc_dimension l
where t.atm_id = a.atm_id and a.atm_loc_id = l.loc_id
group by 1,2,3
order by 4 desc
limit 10;
```

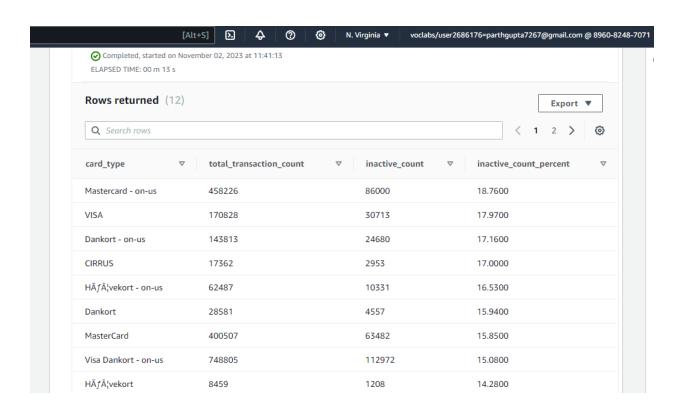






6. Number of failed ATM transactions across various card types

select
c.card_type,
count(t.trans_id) AS total_transaction_count,
sum(case when t.atm_status = 'Inactive' then 1 else 0 end) AS inactive_count,
case when coalesce(inactive_count,0) = 0 then 0.0000
else trunc((cast(inactive_count AS
numeric(10,4))/total_transaction_count)*100,2) end as inactive_count_percent
from
atm_etl_db.transaction_fact t inner join atm_etl_db.card_dimension c on
t.card_type_id = c.card_type_id
group by 1
order by 4 desc;

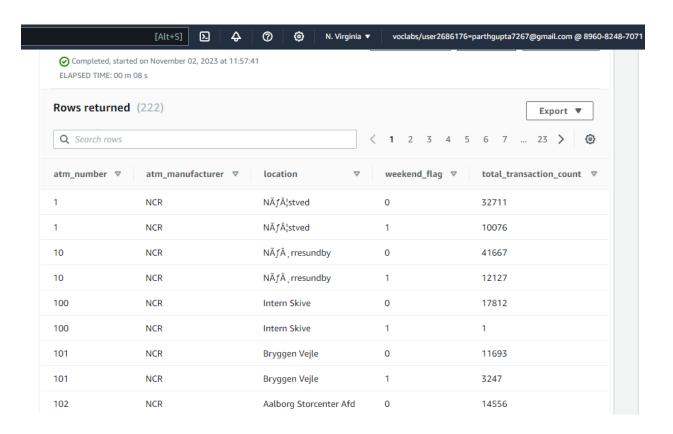






7. Number of transactions happening on an ATM on weekdays and on weekends throughout the year. Order this by the ATM_number, ATM_manufacturer, location, weekend_flag and then total_transaction_count

select a.atm_number, a.atm_manufacturer, l.location, case when d.weekday in ('Saturday','Sunday') then 1 else 0 end as weekend_flag, count(t.trans_id) as total_transaction_count from atm_etl_db.transaction_fact t , atm_etl_db.atm_dimension a , atm_etl_db.loc_dimension l , atm_etl_db.date_dimension d where t.atm_id = a.atm_id and a.atm_loc_id = l.loc_id and t.date_id = d.date_id group by 1,2,3,4,5;







8. Most active day in each ATMs from location "Vejgaard"

select atm_number,atm_manufacturer,location,weekday,total_transaction_count from (select a.atm_number, a.atm_manufacturer, l.location,d.weekday, count(t.trans_id) as total_transaction_count, row_number() over(partition by a.atm_number order by total_transaction_count desc) as Rank from atm_etl_db.transaction_fact t, atm_etl_db.atm_dimension a, atm_etl_db.loc_dimension I, atm_etl_db.date_dimension d where t.atm_id = a.atm_id and a.atm_loc_id = l.loc_id and t.date_id = d.date_id and l.location = 'Vejgaard' group by 1,2,3,4 order by 5) T where T.Rank <= 1

