🔍 Questions

Enter your question here:

Rank plan codes by total revenue
generated each month.

ENTER →

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Query 1

**Question:** How does device type influence data usage and revenue?

SQL Query: SELECT t.device_type, SUM(t.data_volume_gb) AS total_data_usage, SUM(t.data_revenue) AS total_data_revenue FROM telecom_data_v3 t GROUP BY t.device_type ORDER BY total_data_usage DESC NULLS LAST;

Query Result:

	device_type	total_data_usage	total_data_revenue
0	Smartphone	1,176,208.1619	13,262,358,108.554
1	Mobile Phone/Feature phone	41,897.704	563,503,804.0118
2	WLAN Router	21,393.247	62,642,335.91
3	Tablet	13,125.4715	140,953,360.5117
4	Modem	4,449.802	11,819,654.4209
5	Dongle	2,372.0124	11,528,595.7583
6	Unknown	2,235.1177	46,895,745.3521
7	Handheld	2,123.8854	32,144,821.2362
8	Portable(include PDA)	341.4865	3,168,783.6938
9	Connected Computer	216.9392	594,222.6751

Result:

total_data_usage by device_type and Bubble Size by total_data_revenue
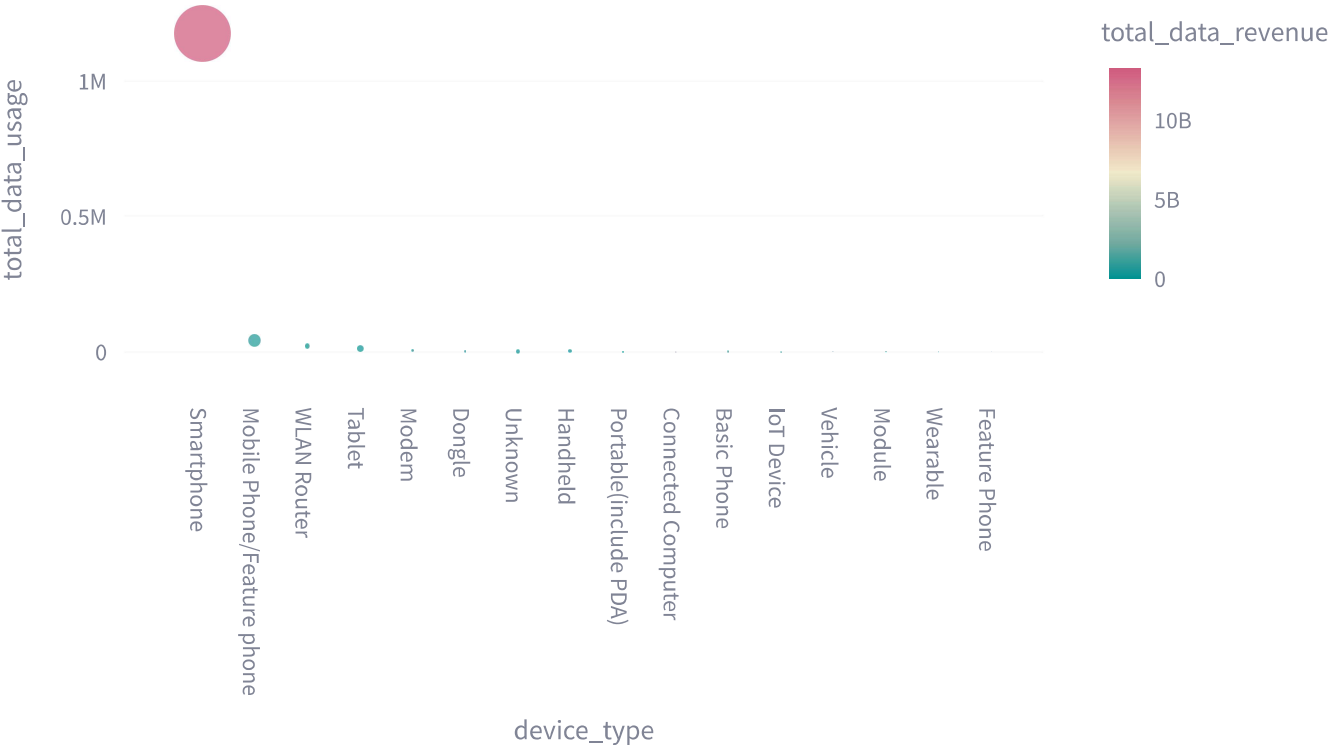
Query 2

**Question:** What are the trends in ACS commission charges over the months?

SQL Query: SELECT t.part_month, SUM(t.acs_commission_chg) AS total_acs_commission FROM telecom_data_v3 t GROUP BY t.part_month ORDER BY t.part_month NULLS LAST;

Query Result:

	part_month	total_acs_commission
0	Apr-23	10,433,254.7782
1	Aug-23	10,485,430.9135
2	Dec-23	67,448,137.5098
3	Feb-23	8,546,753.353
4	Jan-23	9,064,957.7716
5	Jul-23	20,557,167.7752
6	Jun-23	11,998,590.7744
7	Mar-23	10,753,557.1905
8	May-23	10,981,102.2751
9	Nov-23	53,861,096.5595

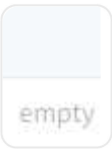Result:

total_acs_commission by part_month
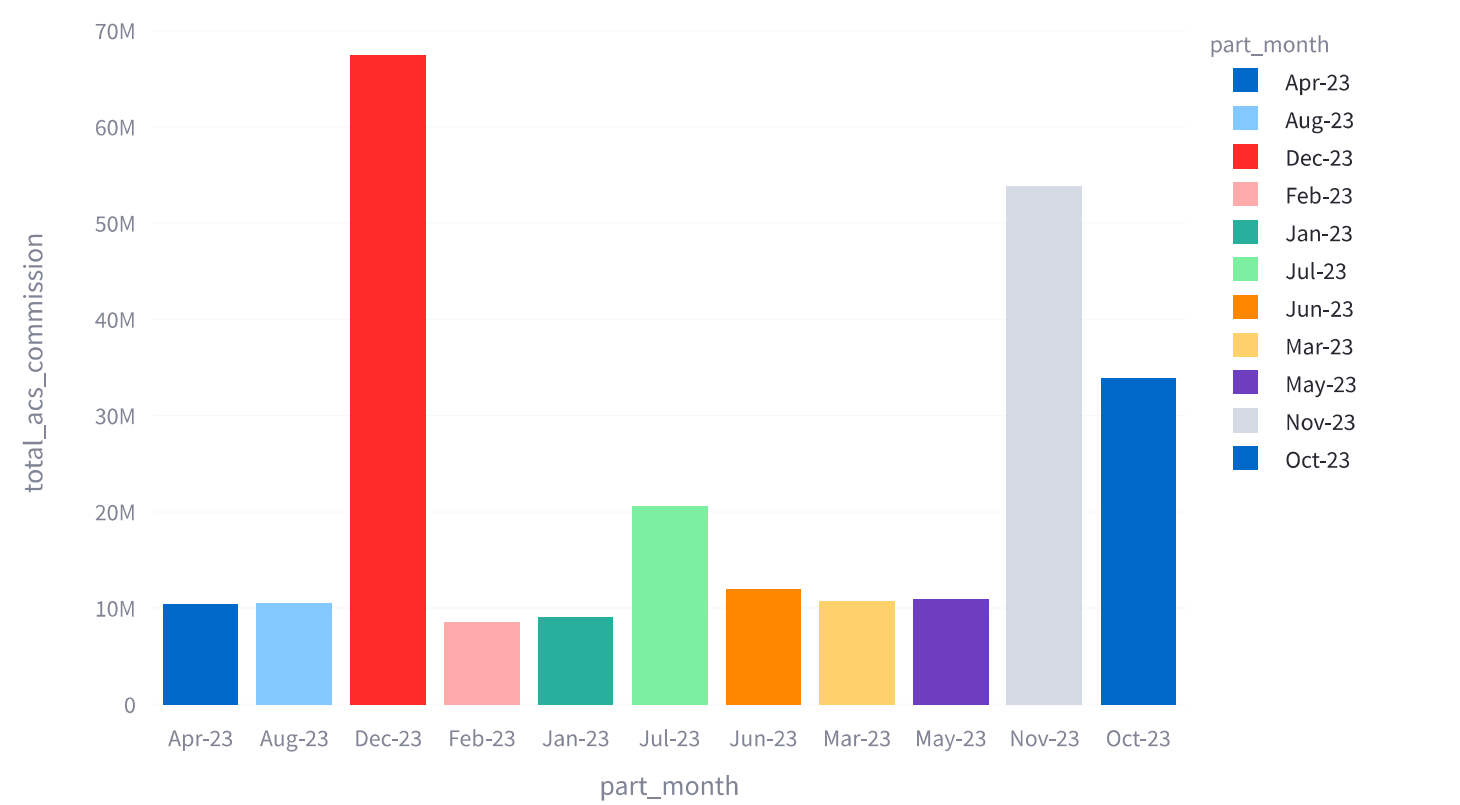
Query 3

Question: Which plan has the highest average data volume usage but the lowest average data revenue?

SQL Query: SELECT t.plan, AVG(t.data_volume_gb) AS average_data_volume, AVG(t.data_revenue) AS average_data_revenue FROM telecom_data_v3 t GROUP BY t.plan ORDER BY average_data_volume DESC, average_data_revenue ASC LIMIT 1;

Query Result:

empty

Result:

No data to display.

Query 4

Question: For each customer segment, what is the average number of SMS messages sent?

SQL Query: SELECT t.overall_cust_segment, AVG(t.sms_total_msgs) AS average_sms_messages FROM telecom_data_v3 t GROUP BY t.overall_cust_segment ORDER BY average_sms_messages DESC NULLS LAST;

Query Result:

	overall_cust_segment	average_sms_messages
0	HVC	206.1223
1	MVC	205.0235
2	LVC	63.5449
3	ZVC	10.6161

Result:

average_sms_messages by overall_cust_segment
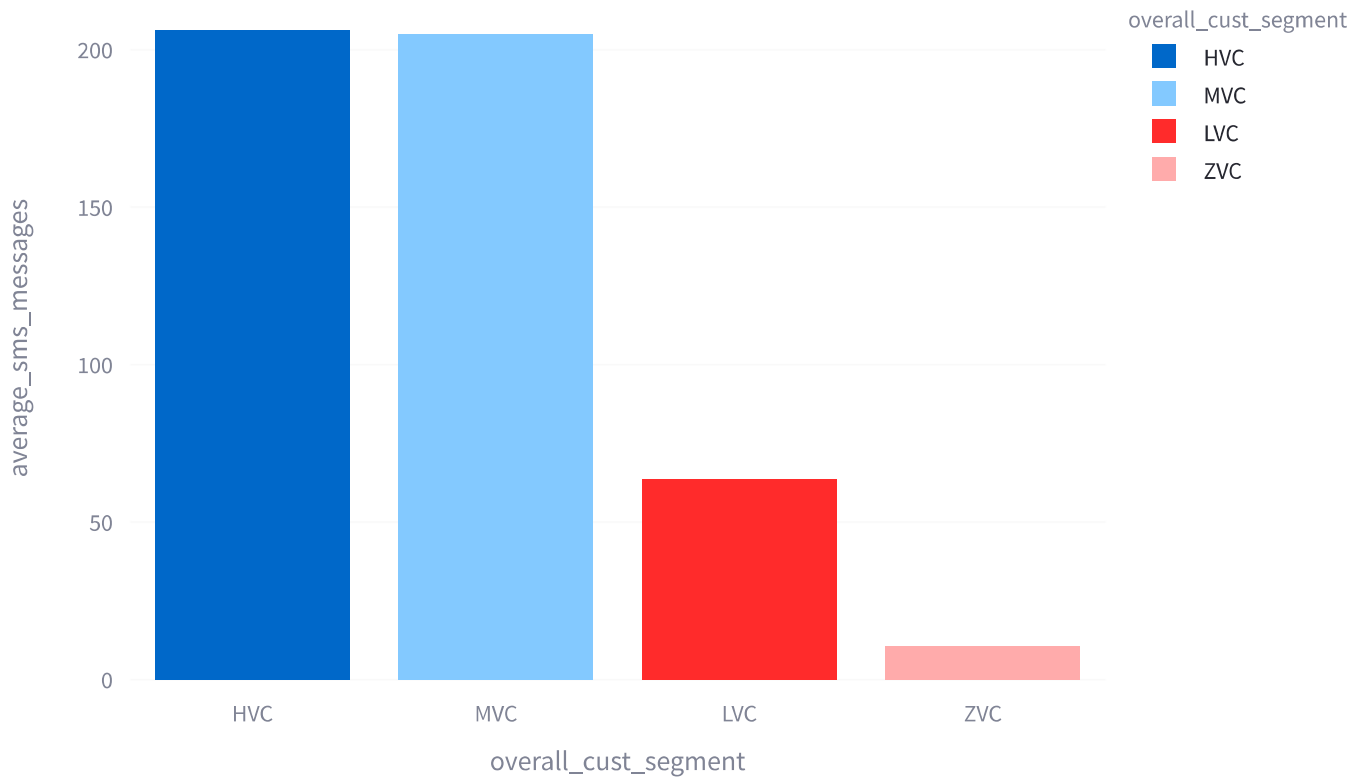
Query 5

Question: What is the proportion of 4G users to total users in each homing BSC?

SQL Query: SELECT t.homing_bsc, CAST(COUNT(DISTINCT CASE WHEN t.subs_max_tech = '4G' THEN t.calling_nbr END) AS FLOAT) / NULLIF(COUNT(DISTINCT t.calling_nbr), 0) AS proportion_4g FROM telecom_data_v3 t GROUP BY t.homing_bsc ORDER BY proportion_4g DESC NULLS LAST;

Query Result:

	homing_bsc	proportion_4g
0	Unmapped	0.5551
1	Harare North	0.4418
2	Harare South	0.3736
3	Mashonaland East + CZA	0.219
4	Matebeleland	0.2012
5	Manicaland	0.1392
6	Masvingo	0.1325
7	Mashonaland C + W	0.1158
8	Midlands	0.1043

Result:

proportion_4g by homing_bsc
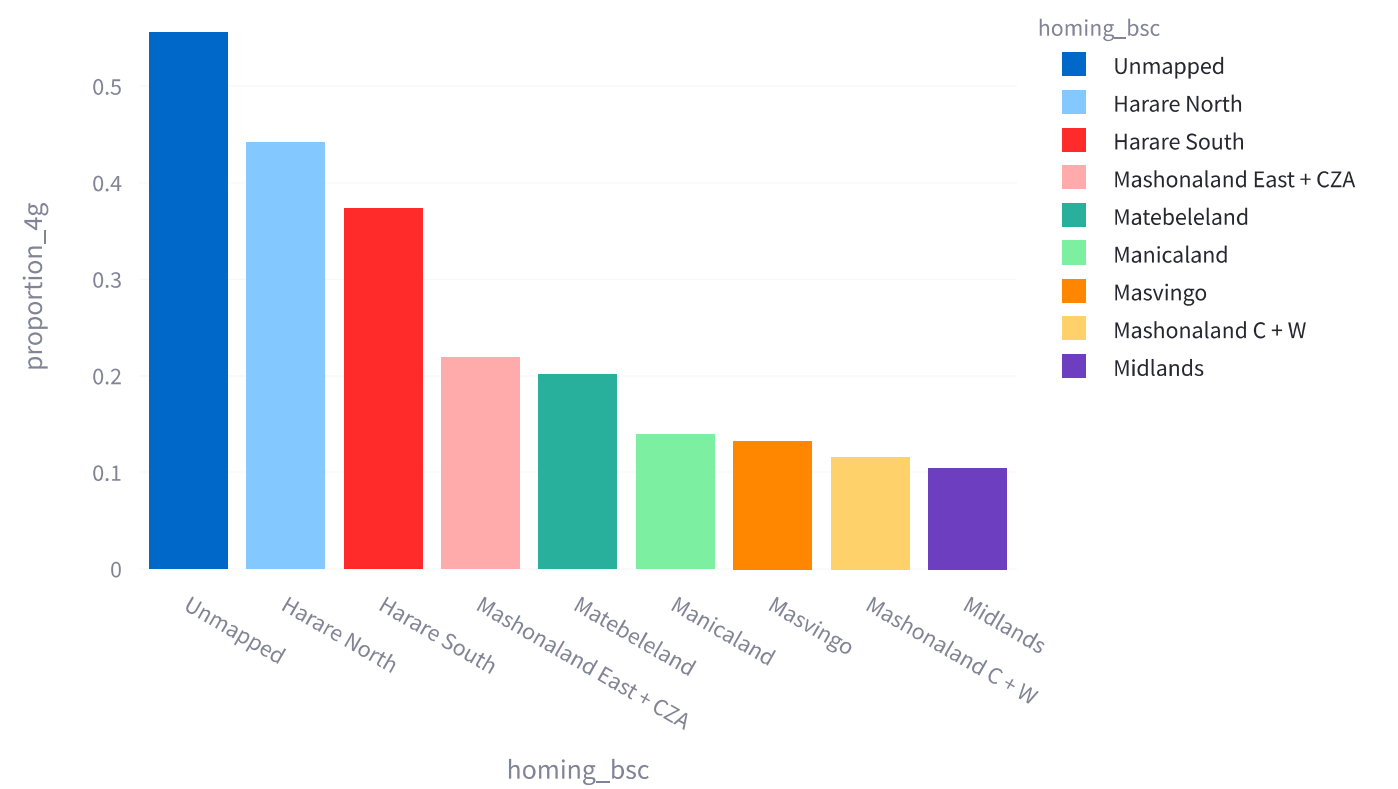
Query 6

Question: For users with more than 500 minutes of voice usage, how does their average data revenue compare to those with less?

SQL Query: SELECT (SELECT AVG(data_revenue) FROM telecom_data_v3 WHERE voice_usage_mins > 500) AS avg_data_revenue_for_users_with_more_than_500_minutes_of_voice_usage,
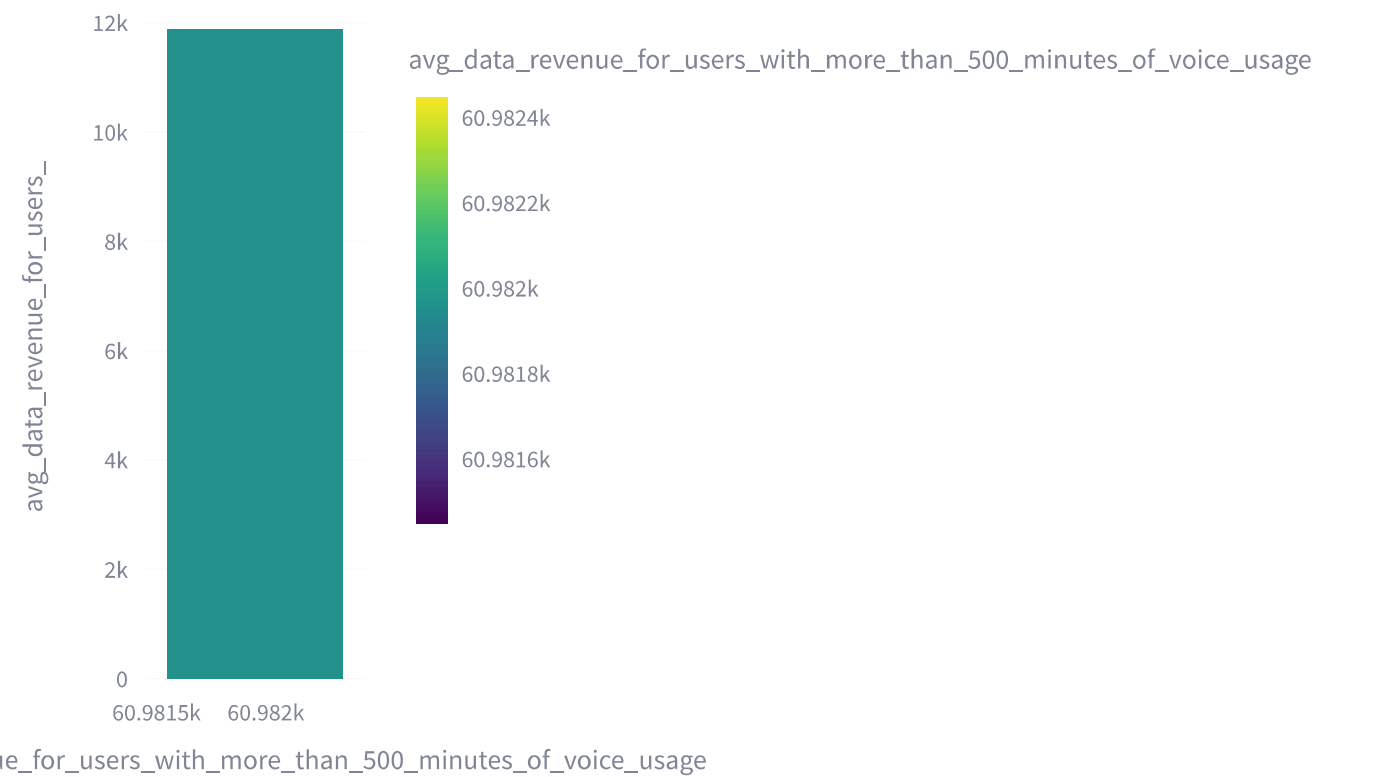
(SELECT AVG(data_revenue) FROM telecom_data_v3 WHERE voice_usage_mins <= 500) AS avg_data_revenue_for_users_

Query Result:

	avg_data_revenue_for_users_with_more_than_500_minutes_of_voice_usage	avg_data_revenue_for_users_
0	60,981.9508	11,875.6666

Result:

avg_data_revenue_for_users_ by avg_data_revenue_for_users_with_more_than_500_minutes_of_

Query 7

Question: Which device type has shown the greatest increase in average data volume usage from Jan-23 to Feb-23?

SQL Query: SELECT t.device_type, AVG(t.data_volume_gb) AS average_data_volume FROM telecom_data_v3 t WHERE t.part_month IN ('Jan-23', 'Feb-23') GROUP BY t.device_type ORDER BY average_data_volume DESC NULLS LAST LIMIT 1;

Query Result:

	device_type	average_data_volume
0	WLAN Router	26.6217

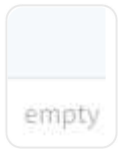**Result:**

average_data_volume by device_type

Query 8

Question: List the top 3 calling numbers with the highest SMS revenue but below-average voice revenue.

SQL Query: SELECT t.calling_nbr, SUM(t.sms_revenue) AS total_sms_revenue, AVG(t.voice_revenue) AS average_voice_revenue FROM telecom_data_v3 t WHERE t.part_month = 'Given Month' GROUP BY t.calling_nbr HAVING AVG(t.voice_revenue) < (SELECT AVG(voice_revenue) FROM telecom_data_v3) ORDER BY total_sms_re

Query Result:

empty

Result:

No data to display.

Query 9

Question: What is the percentage increase in total revenue for each plan from Jan-23 to Feb-23?

SQL Query: SELECT t.plan_code, ((t.total_revenue_feb_23 - t.total_revenue_jan_23) / NULLIF(t.total_revenue_jan_23, 0)) * 100 AS percentage_change FROM (SELECT plan_code, SUM(total_revenue) AS total_revenue_jan_23, SUM(total_revenue) AS total_revenue_feb_23 FROM telecom_data_v3 WHERE part_month

Query Result:

empty

Result:

No data to display.

Query 10

Question: What is the percentage increase in total revenue for each region from Jan-23 to Feb-23?

SQL Query: SELECT t.homing_bsc, ((SUM(t.total_revenue) - LAG(SUM(t.total_revenue), 1) OVER (PARTITION BY t.homing_bsc ORDER BY t.part_month)) / NULLIF(LAG(SUM(t.total_revenue), 1) OVER (PARTITION BY t.homing_bsc ORDER BY t.part_month), 0)) * 100 AS percentage_change FROM telecom_data_

Query Result:

empty

Result:

No data to display.

Query 11

Question: Which month had the highest number of users exceeding 1GB of data usage?

SQL Query: SELECT t.part_month, SUM(t.data_volume_gb) AS total_data_usage FROM telecom_data_v3 t WHERE t.data_volume_gb > 1 GROUP BY t.part_month ORDER BY total_data_usage DESC LIMIT 1;

Query Result:

	part_month	total_data_usage
0	Dec-23	151,630.9467

Result:

total_data_usage by part_month

Query 12

Question: what are the top 2 month had the highest number of users exceeding 1GB of data usage?
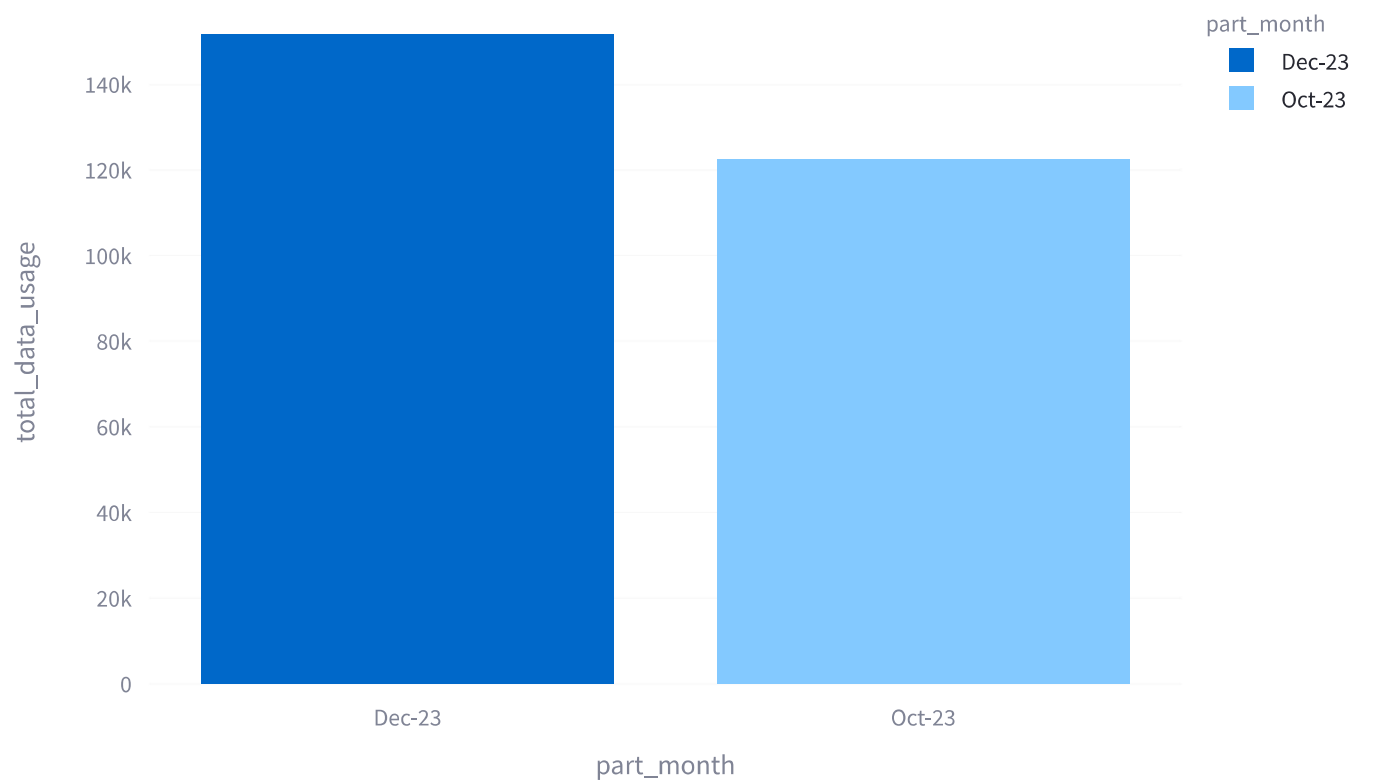
SQL Query: SELECT t.part_month, SUM(t.data_volume_gb) AS total_data_usage FROM telecom_data_v3 t WHERE t.data_volume_gb > 1 GROUP BY t.part_month ORDER BY total_data_usage DESC NULLS LAST LIMIT 2;

Query Result:

	part_month	total_data_usage
0	Dec-23	151,630.9467
1	Oct-23	122,447.8156

Result:

total_data_usage by part_month

Query 13

Question: what are the top 4 month had the highest number of users exceeding 1GB of data usage?
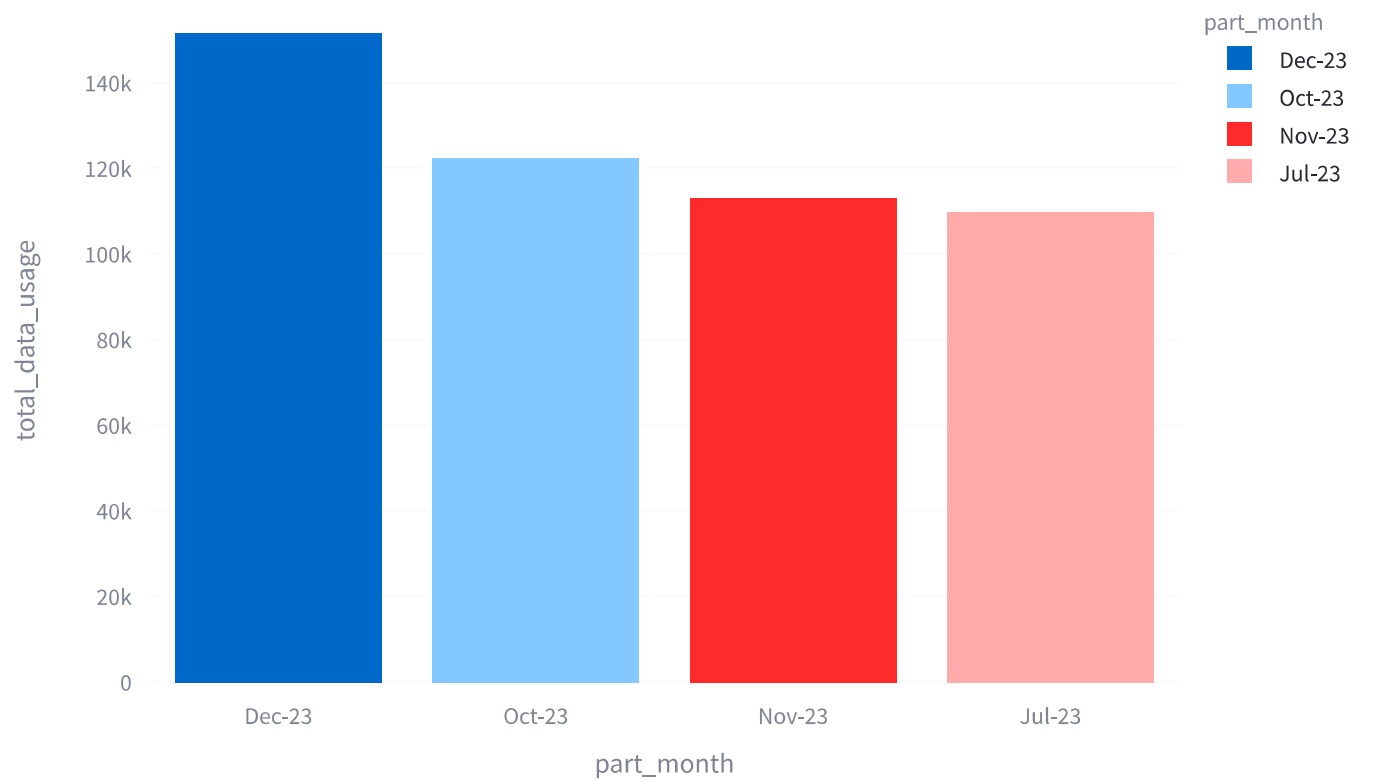
SQL Query: SELECT t.part_month, SUM(t.data_volume_gb) AS total_data_usage FROM telecom_data_v3 t WHERE t.data_volume_gb > 1 GROUP BY t.part_month ORDER BY total_data_usage DESC NULLS LAST LIMIT 4;

Query Result:

	part_month	total_data_usage
0	Dec-23	151,630.9467
1	Oct-23	122,447.8156
2	Nov-23	113,162.0177
3	Jul-23	109,867.6453

Result:

total_data_usage by part_month

Query 14

**Question**: For each plan code, find the month with the highest average acs commission charge.

SQL Query: SELECT t.plan_code, t.part_month, AVG(t.acs_commission_chg) AS average_acs_commission FROM telecom_data_v3 t GROUP BY t.plan_code, t.part_month ORDER BY average_acs_commission DESC NULLS LAST LIMIT 1;

Query Result:

	plan_code	part_month	average_acs_commission
0	Prepaid	Dec-23	681.1506

Result:

part_month by plan_code and Bubble Size by average_acs_commission
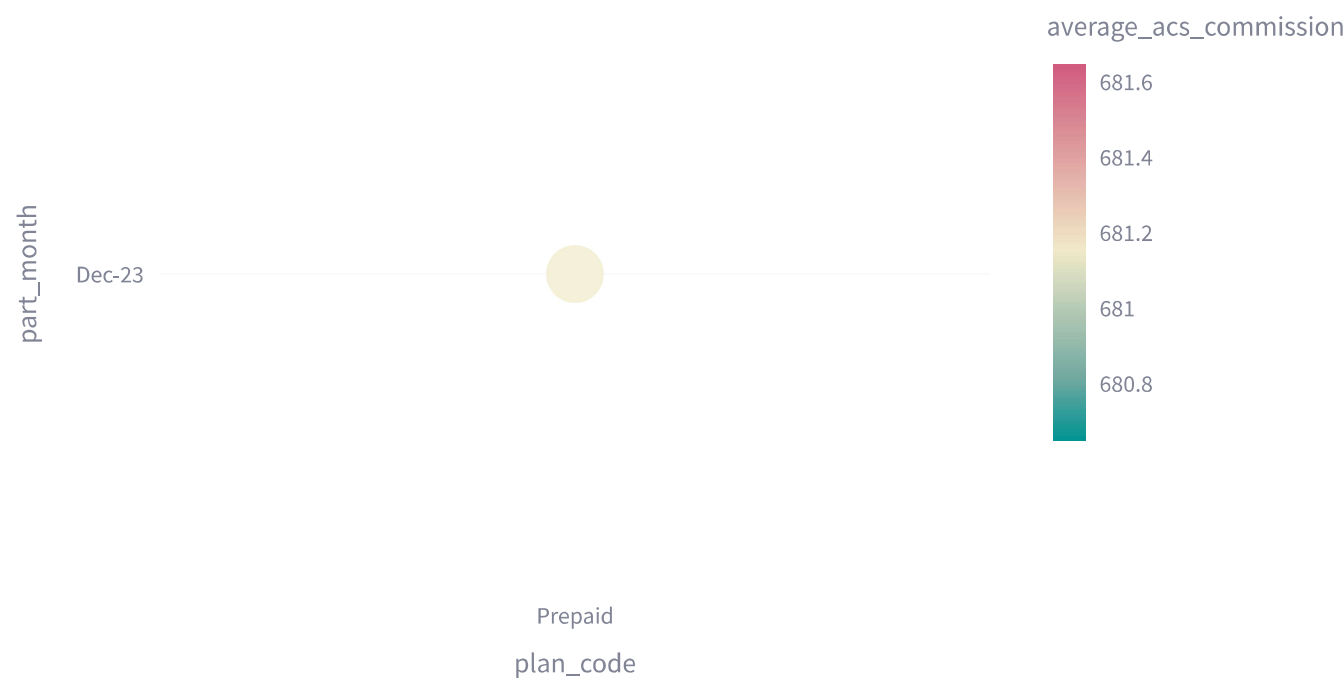
Query 15

**Question**: What are the top 10 revenue-generating customers for a given dec-23 month?

SQL Query: SELECT t.calling_nbr, t.total_revenue FROM telecom_data_v3 t WHERE t.part_month = 'Dec-23' ORDER BY t.total_revenue DESC LIMIT 10;

Query Result:

	calling_nbr	total_revenue
0	263,776,747,074	3,631,220.886
1	263,774,173,144	3,282,338.944
2	263,772,836,420	2,572,572.282
3	263,772,594,468	2,561,008.512
4	263,774,570,361	2,284,255.561
5	263,774,521,553	2,081,260.183
6	263,773,707,273	2,041,544.67
7	263,775,508,834	1,877,905.498
8	263,776,825,879	1,838,433.028
9	263,772,319,482	1,793,597.498

Result:

total_revenue by calling_nbr
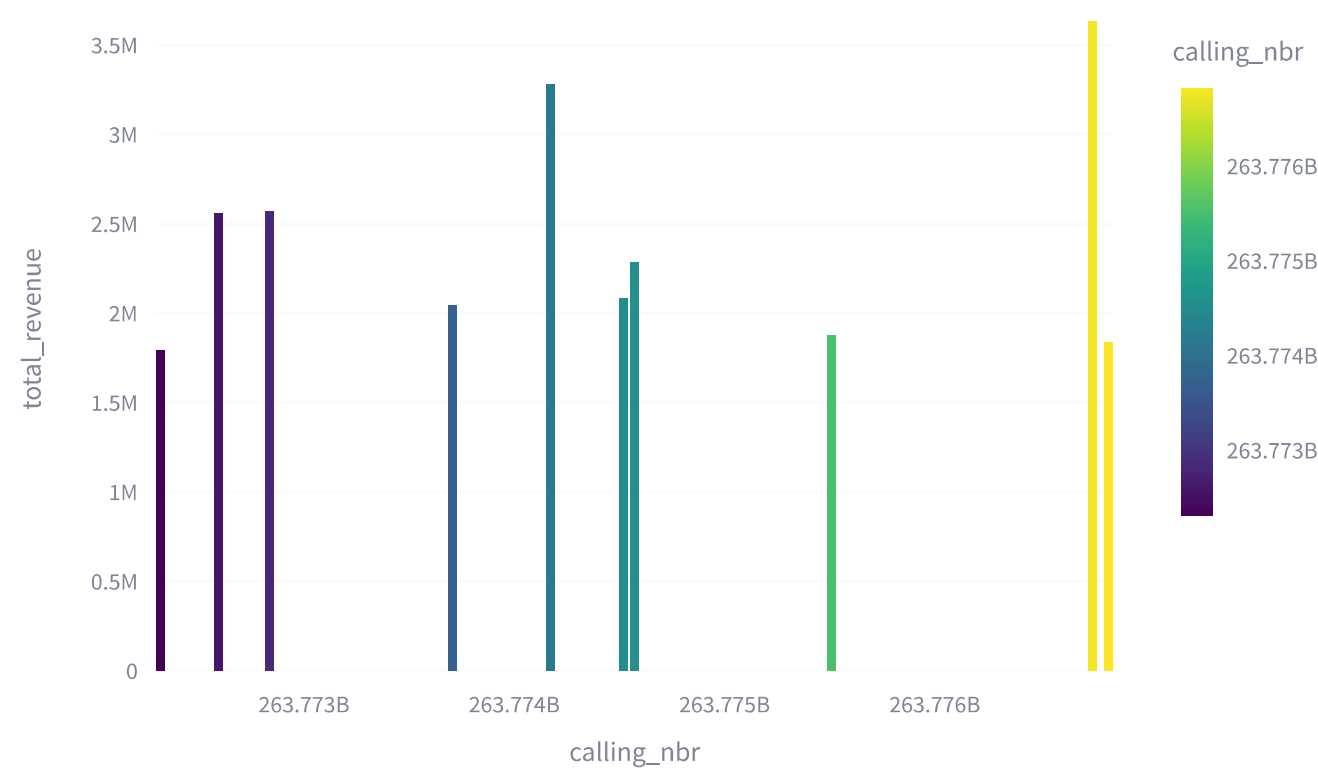
Query 16

Question: Rank plan codes by total revenue generated each month.

SQL Query: SELECT t.part_month, t.plan_code, t.total_revenue, rank() OVER (PARTITION BY t.part_month ORDER BY t.total_revenue DESC) AS rank FROM telecom_data_v3 t ORDER BY t.part_month, rank NULLS LAST;

Query Result:

	part_month	plan_code	total_revenue	rank
0	Apr-23	Staff & Spouse	478,155.6362	1
1	Apr-23	Staff & Spouse	409,404.969	2
2	Apr-23	Prepaid	402,707.8439	3
3	Apr-23	Postpaid	354,937.0886	4
4	Apr-23	Postpaid	353,186.6528	5
5	Apr-23	Prepaid	341,528.0088	6
6	Apr-23	Staff & Spouse	322,576.1818	7
7	Apr-23	Staff & Spouse	313,747.461	8
8	Apr-23	Postpaid	308,676.1494	9
9	Apr-23	Prepaid	268,865.9359	10

Result:

	part_month	plan_code	total_revenue	rank
0	Apr-23	Staff & Spouse	478,155.6362	1
1	Apr-23	Staff & Spouse	409,404.969	2
2	Apr-23	Prepaid	402,707.8439	3
3	Apr-23	Postpaid	354,937.0886	4
4	Apr-23	Postpaid	353,186.6528	5
5	Apr-23	Prepaid	341,528.0088	6
6	Apr-23	Staff & Spouse	322,576.1818	7
7	Apr-23	Staff & Spouse	313,747.461	8
8	Apr-23	Postpaid	308,676.1494	9
9	Apr-23	Prepaid	268,865.9359	10