📲Tech Instagram Influencer Analysis

📊Performance Insights & Data-Driven Strategy

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📁Project Overview

🎯Project Statement

This project analyzes a Tech Influencer’s Instagram content using SQL to uncover engagement trends, identify top-performing content, and develop data-driven strategies to grow reach, saves, likes, and followers

📜Objective

- Analyze Instagram performance by post type and category
- Understand user engagement patterns (likes, comments, saves)
- Track profile visits, reach, impressions, and follower growth
- Recommend best practices for content strategy

🗂️ Datasets Used

- dim_date: Contains the calendar and date-related information
- fact_account: Profile-level metrics (followers, profile visits, reach, impressions)
- fact_content: Post-level data (likes, comments, saves, shares, post type, categories, etc.)

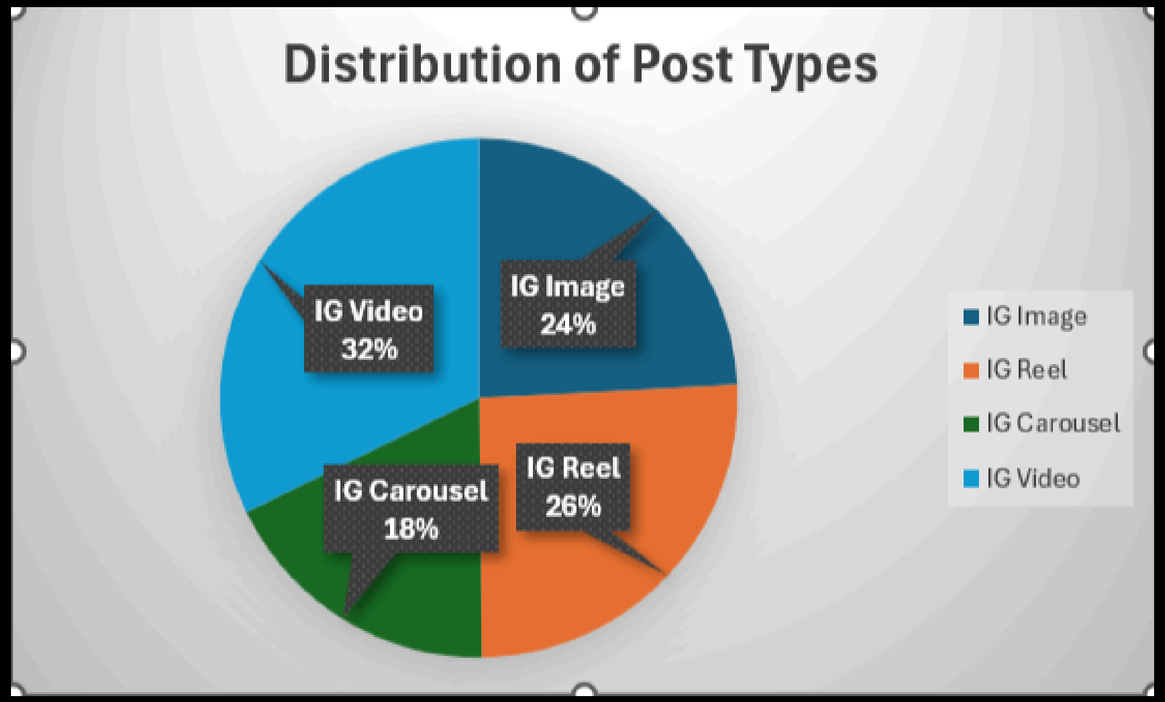
🛠️ Tools Used

- SQL for data querying
- PowerPoint/Canva for visualization

1. How many unique post types are found in the 'fact_content' table?📂

question_1.sql

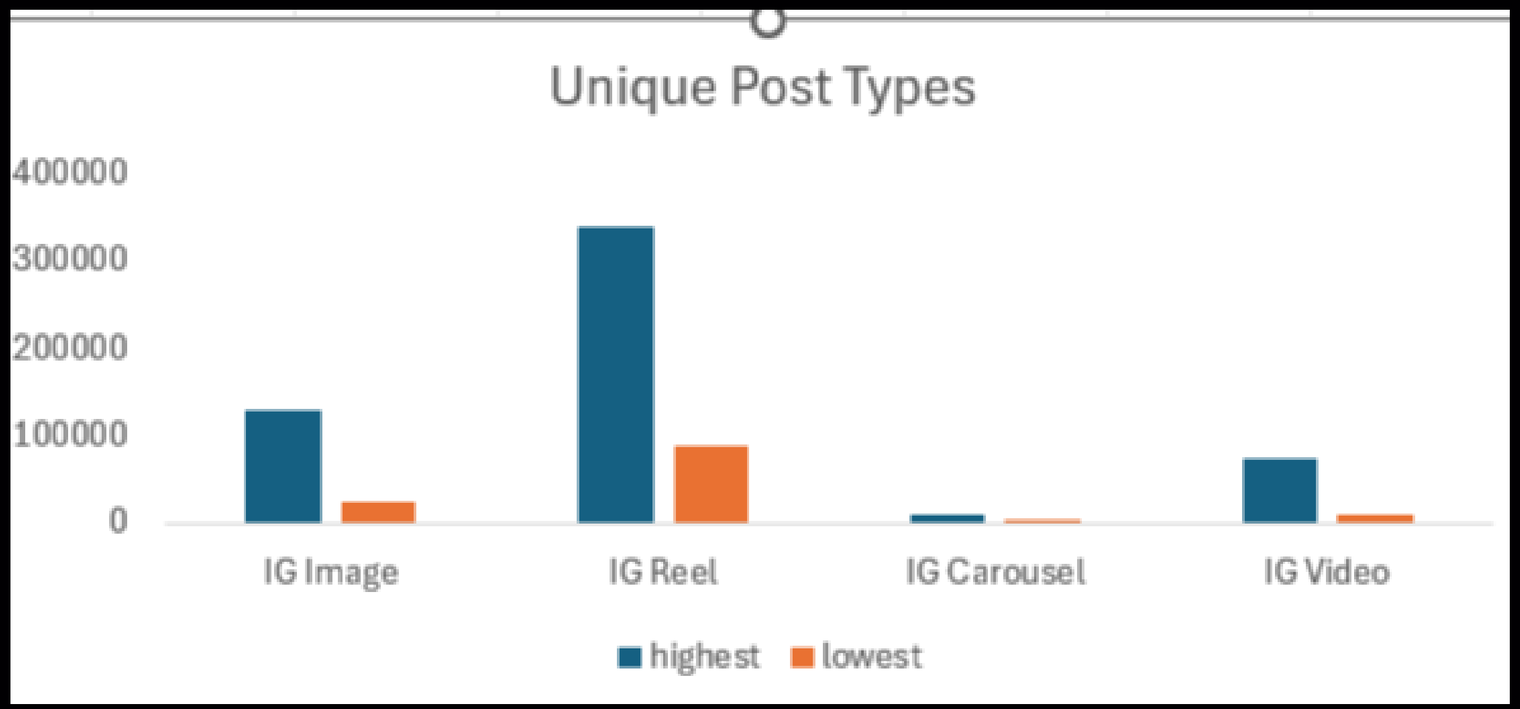
```sql
SELECT
count(distinct(post_type)) AS unique_post_types
FROM fact_content;
```



2. What are the highest and lowest recorded impressions for each post type?

question_2.sql

```sql
SELECT
DISTINCT(post_type) as unique_post_type,
MAX(impressions) as highest,
MIN(impressions) as lowest
FROM fact_content
GROUP BY unique_post_type;
```



3. Filter all the posts that were published on a weekend in the month of March and April and export them to a separate csv file.

question_3.sql

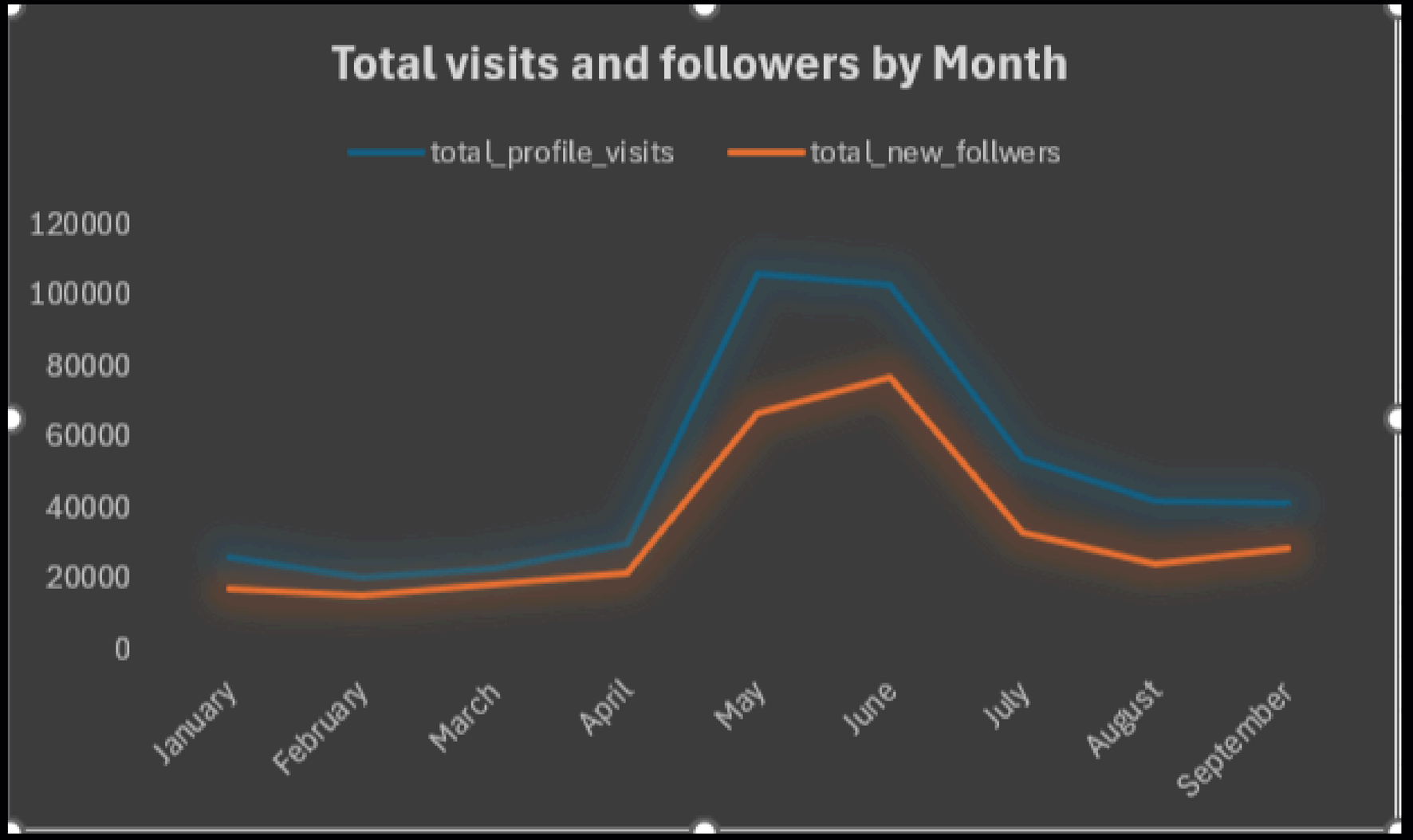
```sql
SELECT fc.*, d.month_name, d.weekday_name
FROM fact_content AS fc
INNER JOIN dim_dates AS d ON d.`date` = fc.`date`
WHERE d.month_name IN ("March", "April")
AND d.weekday_or_weekend = "Weekend";
```

date	post_category	post_type	video_du	carousel_	impressions	reach	shares	follows	likes	commen	saves
04-03-2023	Earphone	IG Video	291	0	12265	3668	69	92	327	7	18
05-03-2023	Smartwatch	IG Image	0	0	62770	18001	273	360	1194	28	76
11-03-2023	Mobile	IG Carousel	0	3	5899	1093	45	12	53	0	6
12-03-2023	Laptop	IG Image	0	0	79416	23474	327	259	1235	69	204
18-03-2023	Mobile	IG Carousel	0	3	9157	2254	67	58	55	6	15
19-03-2023	Smartwatch	IG Carousel	0	3	4146	1079	42	17	43	1	6
25-03-2023	Earphone	IG Reel	22	0	132284	66721	1093	1482	3622	83	695
26-03-2023	Mobile	IG Image	0	0	63425	26113	435	336	1994	68	179
01-04-2023	Mobile	IG Carousel	0	3	4549	1052	27	18	35	1	6
02-04-2023	Earphone	IG Video	163	0	54672	16126	172	182	938	22	81
08-04-2023	Other Gadgets	IG Video	258	0	37955	12663	204	164	753	31	63
09-04-2023	Mobile	IG Image	0	0	52278	14438	271	167	1393	36	44
15-04-2023	Laptop	IG Reel	30	0	123270	39850	296	1486	3926	101	1139
16-04-2023	Other Gadgets	IG Reel	29	0	115701	66829	937	929	5749	94	658
22-04-2023	Laptop	IG Video	172	0	33604	14682	255	349	1038	22	73
23-04-2023	Earphone	IG Video	229	0	36973	13629	224	244	929	30	68
29-04-2023	Earphone	IG Video	206	0	43526	11799	134	138	646	12	59
30-04-2023	Mobile	IG Reel	59	0	185017	63990	1010	2238	6039	94	330

4. Create a report to get the statistics for the account: month_name, total_profile_visits, total_new_followers

question_4.sql

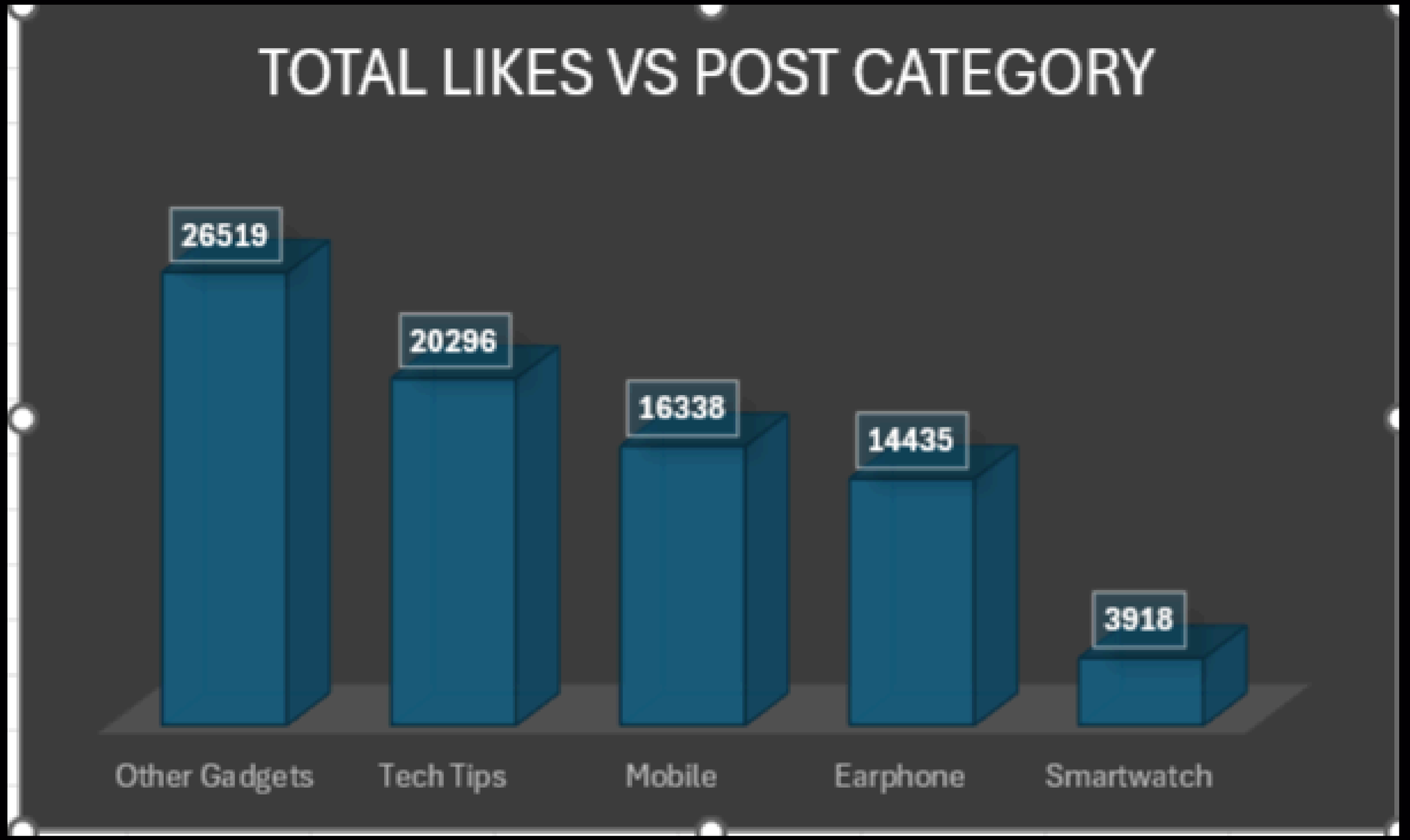
```sql
SELECT d.month_name,
SUM(fa.profile_visits) as total_profile_visits,
SUM(fa.new_followers) as total_new_follwers
FROM fact_account as fa
INNER JOIN dim_dates as d ON d.`date` = fa.`date`
GROUP BY d.month_name;
```


Total visits and followers by Month
total_profile_visits
total_new_follwers
120000
100000
80000
60000
40000
20000
0
January
February
March
April
May
June
July
August
September

5. CTE that calculates the total number of 'likes’ for each 'post_category' during the month of 'July', ordered by total likes descending

question_5.sql

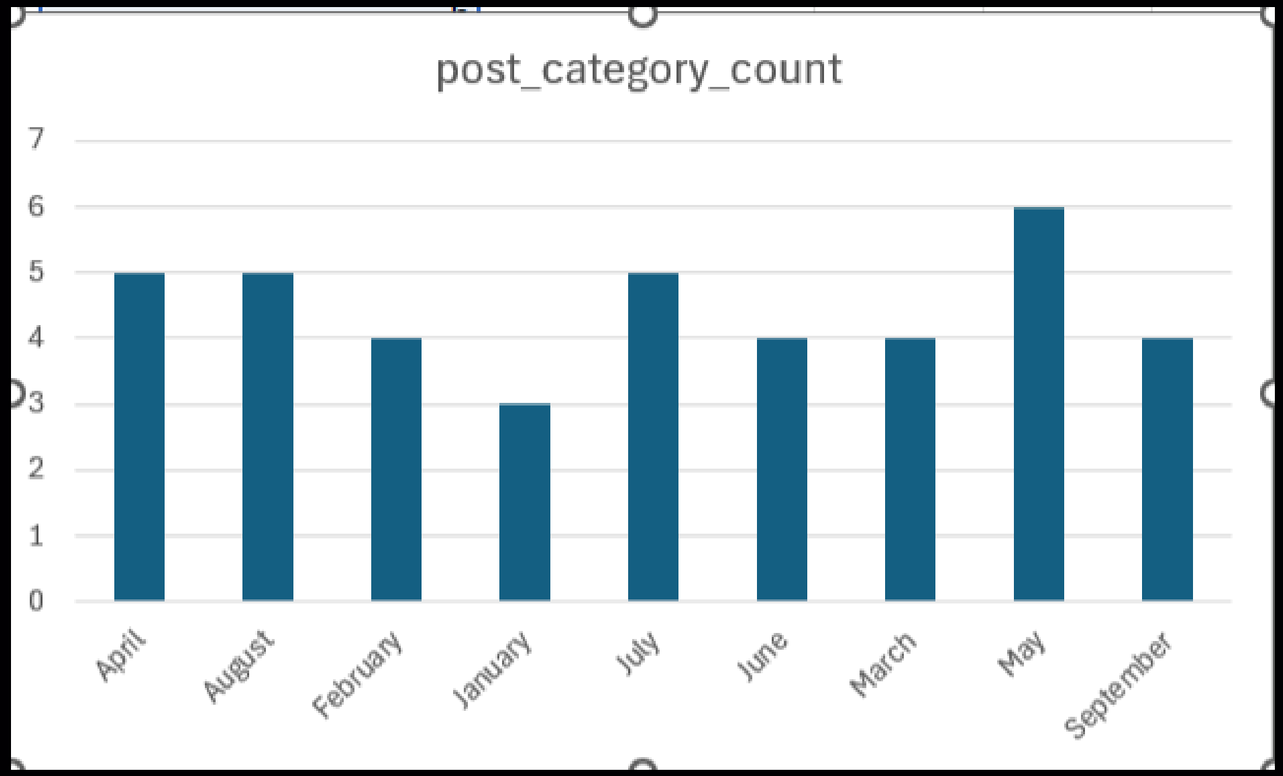
```sql
WITH cte_likes AS (
    SELECT fc.post_category, SUM(fc.likes) AS total_likes
    FROM fact_content AS fc
    INNER JOIN dim_dates AS d ON d.`date` = fc.`date`
    WHERE d.month_name = "July"
    GROUP BY fc.post_category
)
SELECT * FROM cte_likes
ORDER BY total_likes DESC;
```


TOTAL LIKES VS POST CATEGORY
26519
20296
16338
14435
3918
Other Gadgets
Tech Tips
Mobile
Earphone
Smartwatch

6. Unique post_category names alongside their respective counts for each month

question_6.sql

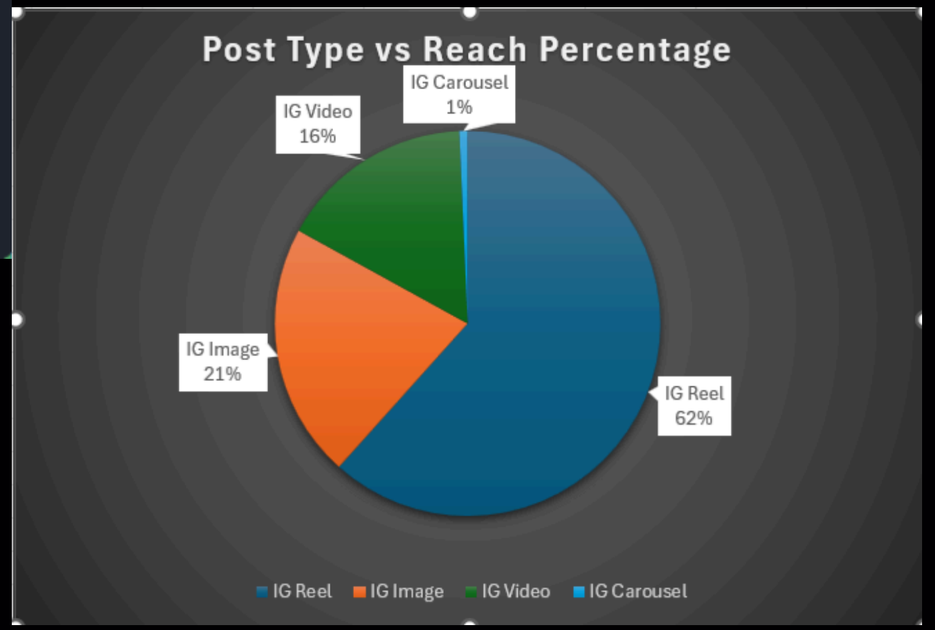
```sql
SELECT
    d.month_name,
    GROUP_CONCAT(DISTINCT fc.post_category
    ORDER BY fc.post_category SEPARATOR ', ') AS post_category_names,
    COUNT(DISTINCT fc.post_category) AS post_category_count
FROM fact_content AS fc
INNER JOIN dim_dates AS d ON d.`date` = fc.`date`
GROUP BY d.month_name
ORDER BY d.month_name;
```



7. Percentage breakdown of total reach by post type

question_7.sql

```sql
WITH reach_cte AS (
    SELECT post_type, SUM(reach) AS total_reach FROM fact_content GROUP BY post_type
),
total AS (
    SELECT SUM(total_reach) AS grand_total FROM reach_cte
)
SELECT r.post_type, r.total_reach,
       ROUND((r.total_reach / t.grand_total) * 100, 2) AS reach_percentage
FROM reach_cte r, total t
order by reach_percentage DESC;
```



8. Quarter, total comments, and total saves for each post category

question_8.sql

```sql
SELECT fc.post_category,
       CASE
           WHEN dd.month_name IN ('January', 'February', 'March') THEN 'Q1'
           WHEN dd.month_name IN ('April', 'May', 'June') THEN 'Q2'
           WHEN dd.month_name IN ('July', 'August', 'September') THEN 'Q3'
           ELSE 'Q4'
       END AS quarter,
       SUM(fc.comments) AS total_comments,
       SUM(fc.saves) AS total_saves
FROM fact_content fc
JOIN dim_dates dd ON fc.date = dd.date
GROUP BY fc.post_category, quarter;
```

post_category	quarters	total_comments	total_saves
Mobile	Q1	1836	9843
Smartwatch	Q1	600	2860
Earphone	Q1	351	2230
Laptop	Q1	418	2837
Mobile	Q2	2313	17207
Earphone	Q2	589	3602
Smartwatch	Q2	1358	12581
Other Gadgets	Q2	1622	12041
Laptop	Q2	452	2248
Tech Tips	Q2	2201	17649
Other Gadgets	Q3	964	4457
Smartwatch	Q3	971	3326
Earphone	Q3	427	3247
Tech Tips	Q3	1596	12976
Mobile	Q3	1134	5285

9. Top 3 dates in each month with highest new followers

question_9.sql

```sql
with RankedFollowers as (
    SELECT d.month_name as month_name,
    d.`date`,
    fa.new_followers,
    RANK() OVER(PARTITION BY d.month_name ORDER BY fa.new_followers DESC) AS rank_num
    FROM fact_account as fa
    INNER JOIN dim_dates as d on d.`date` = fa.`date`


)
select month_name, `date`, new_followers
FROM RankedFollowers
where rank_num ⩽ 3
ORDER BY month_name, rank_num;
```

month_name	date	new_followers
April	25-04-2023	3736
April	30-04-2023	2753
April	06-04-2023	2500
August	23-08-2023	2074
August	21-08-2023	1783
August	06-08-2023	1687
February	01-02-2023	4106
February	24-02-2023	2383
February	02-02-2023	1989
January	30-01-2023	3186
January	03-01-2023	2959
January	23-01-2023	1003
July	08-07-2023	3716
July	15-07-2023	3364
July	28-07-2023	2344
June	30-06-2023	8804
June	03-06-2023	8802
June	21-06-2023	7033
March	21-03-2023	5421
March	28-03-2023	2513
March	25-03-2023	2356
May	08-05-2023	8872
May	20-05-2023	6169
May	12-05-2023	6051
September	16-09-2023	3849
September	22-09-2023	3570
September	21-09-2023	2285

10. Stored Procedure: total shares for each post_type for a given Week_no

question_10.sql

```sql
DELIMITER $$

CREATE PROCEDURE GetTotalSharesByWeek(IN input_week_no VARCHAR(5))
BEGIN
    SELECT
        fc.post_type,
        SUM(fc.shares) AS total_shares
    FROM fact_content AS fc
    INNER JOIN dim_dates AS d ON d.`date` = fc.`date`
    WHERE d.week_no = input_week_no  -- Matches 'W1', 'W2', etc.
    GROUP BY fc.post_type
    ORDER BY total_shares DESC;
END $$

CALL GetTotalSharesByWeek('W32');
```

post_type	total_shares
IG Video	1312
IG Image	1213
IG Reel	339

Recommendations

- Prioritize Reels for Maximum Reach
- Insight: Reels contributed over 50% of total reach.
- Action: Increase Reels posting frequency, especially around product demos and tech tips.

Capitalize on High-Engagement Categories

- Insight: Mobile-related content had the most likes in July.
- Action: Schedule more content around smartphones, gadgets, and tech news.

Strategically Post on Weekends

- Insight: Consistent engagement was observed on weekend posts in March & April.
- Action: Schedule regular weekend content, especially Reels or Carousels.

Use Followers Spike Dates for Campaigns

- Insight: Certain dates every month saw follower spikes.
- Action: Replicate content themes/formats from those dates or align marketing campaigns with them.

Focus on Content that Drives Saves

- Insight: "Tech Tips" had more saves than comments, showing value-driven content.
- Action: Increase educational or tips-based content to build long-term retention.

🙏Conclustion

"To summarize, this project used real-world SQL scenarios to analyze Instagram performance across multiple angles – content variety, engagement, reach, and follower growth.

Some key takeaways:

- Reels and stories consistently perform well in terms of reach.
- July and April were strong months for engagement.
- Weekend posts and specific days saw a spike in followers.
- Using stored procedures and CTEs helped make reporting scalable.
- This project deepened my understanding of SQL and real-time decision-making through data.
- Thank you! I’d be happy to answer your questions.