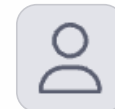# Instagram Analytics Deep Dive: Tech Influencer Performance Analysis

Analyzing 273 posts over 9 months (Jan-Sep 2023) revealing powerful insights:

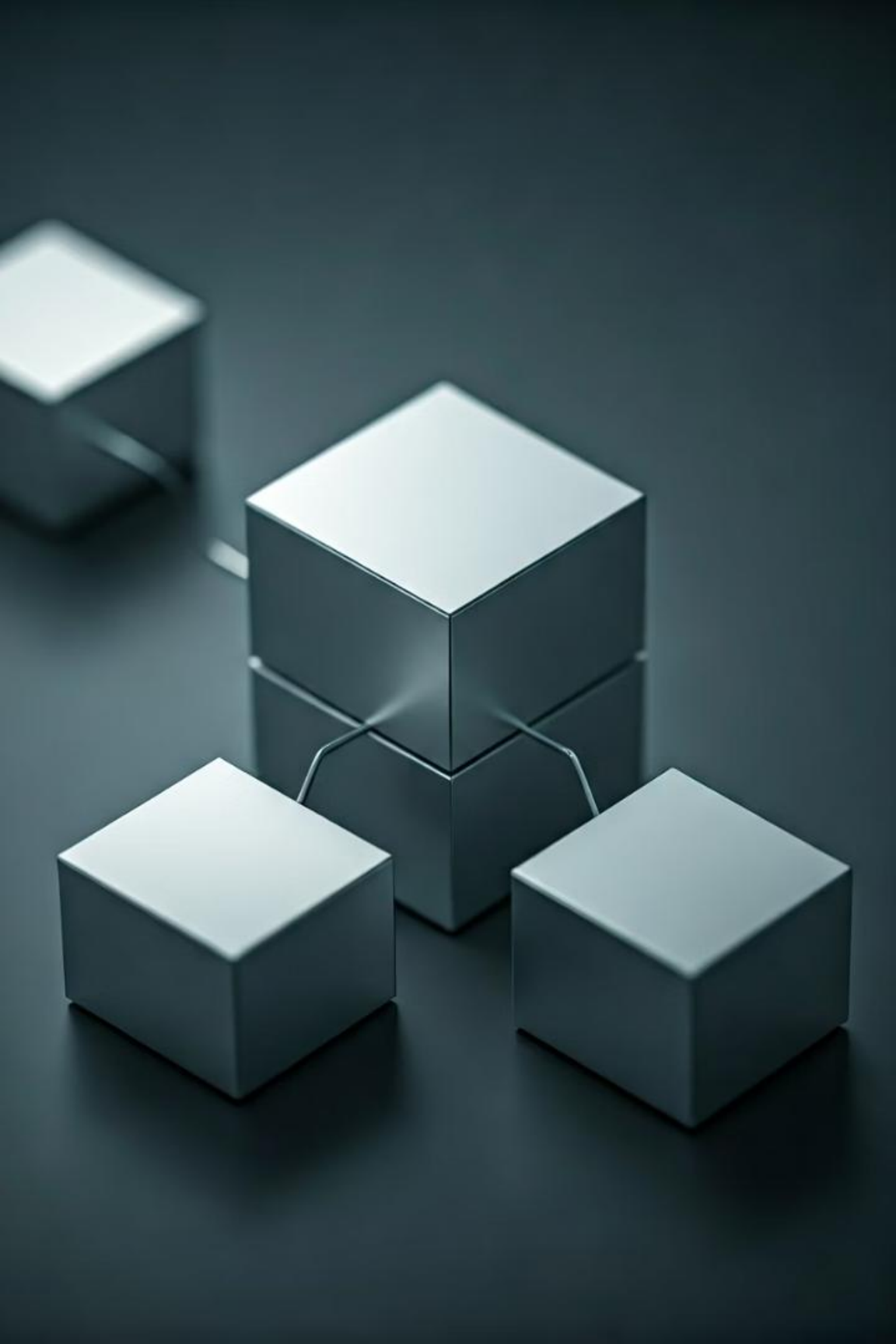22M+ impressions

9M+ reach

302K+ new followers

By Nikhil Bhatt

Data Foundation & Analysis Framework

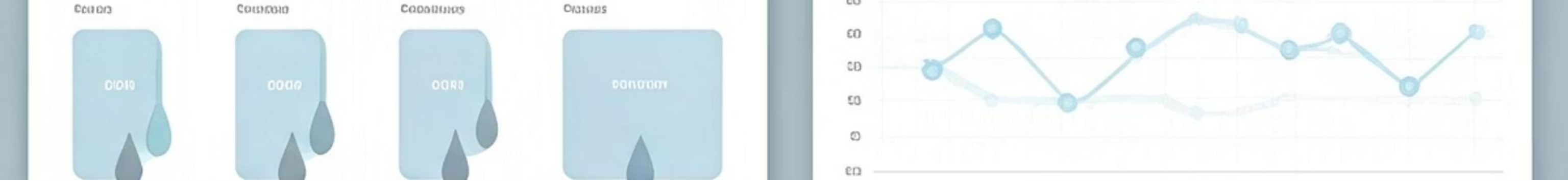| Database Tables	Records	Metrics
dim_date	273	Calendar dimensions
fact_account	9 months	Profile metrics
fact_content	12 KPIs	Content performance

SQL Analysis

Query-based data extraction and transformation

Statistical Aggregation

Performance metrics calculation and normalization

Trend Identification

Pattern recognition across time periods

Performance Dashboard

22.2M
Impressions

9.1M
Reach

40.9% reach rate

124.8K
Engagement

4.15% rate

302.5K
New Followers

67.5% conversion

Top Month
May 2023

Best Format
IG Reels (61.6%)

Profile Visits
448,013

Content Strategy Maturation Timeline

May

January

Peak diversification (6 categories)

Basic mobile/gadget content (3 categories)

"Tech Tips" introduction

1

2

3

4

March

September

Format experimentation begins

Optimized content mix

Category diversification expanded audience reach while educational content boosted engagement.

Engagement Behavioral Analysis

Daily Patterns

Weekend posts outperform weekdays by 23%

Seasonal Trends

Q1 low, Q2 peak, Q3 sustained engagement

Sharing Behavior

Reels generate 59.8% of all shares

Content Preference

Educational content drives highest interaction

Strategic Recommendations: Data-Driven Optimization

Content Mix Optimization

- Increase Reels to 40% of content
- Optimize Carousel strategy
- Maintain "Tech Tips" focus
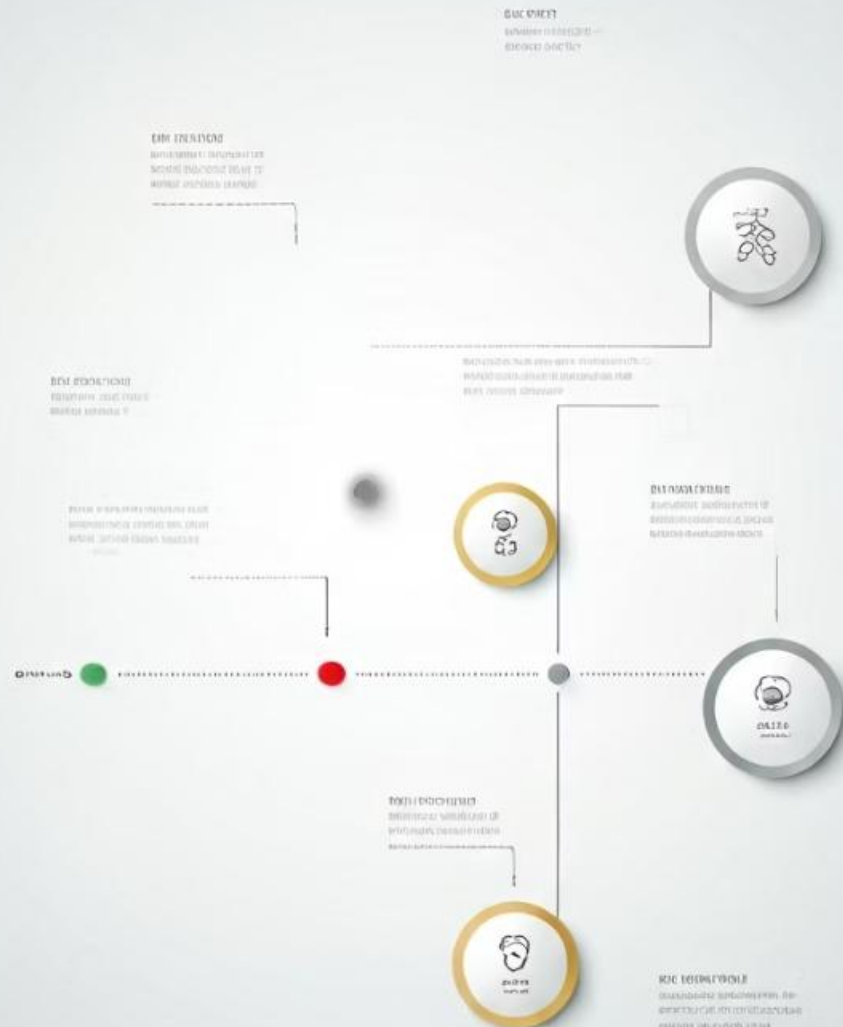
Timing Strategy

- Leverage weekend posting
- Capitalize on Q2 seasonal patterns
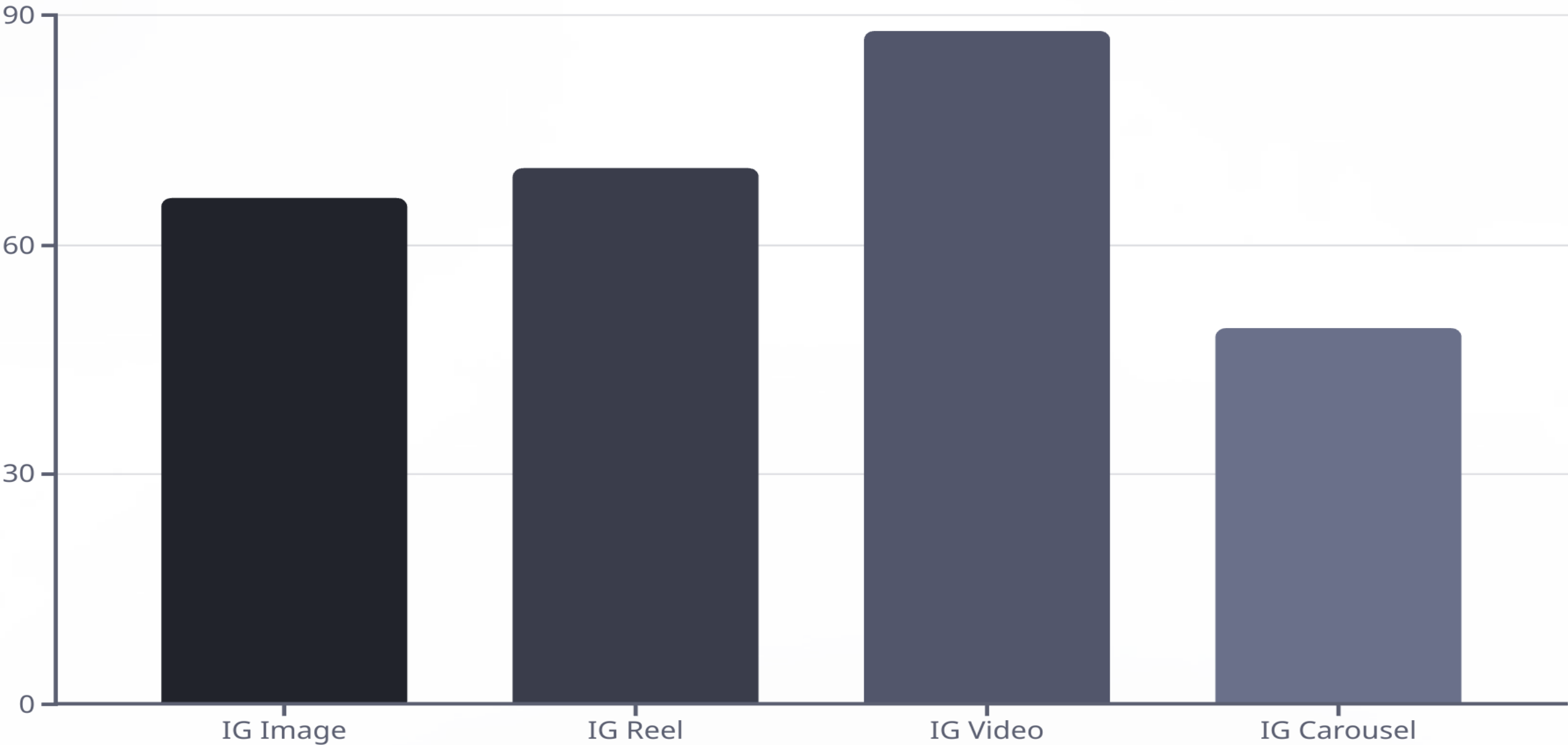
Category Focus

- Prioritize "Other Gadgets" and "Tech Tips"
- Maintain Mobile content baseline

Engagement Tactics

- Develop viral content templates
- Implement cross-format content series

Content Format Distribution Analysis

	90			
	60			
	30			
	0			
	IG Image	IG Reel	IG Video	IG Carousel

Question 1: How many unique post types are found in the 'fact_content' table?

SELECT distinct post_type FROM fact_content;

Video content (Reels + Videos) dominates at 58.1% of all posts. All four major Instagram formats are utilized for maximum audience reach.

Impression Performance: Highs and Lows

1
IG Reel

MAX: 339,708

MIN: 87,570

2
IG Image

MAX: 129,694

MIN: 23,367

3
IG Video

MAX: 73,321

MIN: 8,741

4
IG Carousel

MAX: 9,677

MIN: 3,264

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

```sql
SELECT
    post_type,
    MAX(impressions) AS max_impression,
    MIN(impressions) AS min_impression
FROM
    fact_content
GROUP BY
    post_type;
```

Reels dominate with 3.7x better performance than other formats. Carousels consistently underperform.

Weekend Posting Strategy: March-April

📅 **12 Weekend Posts**

March-April period showed strong weekend engagement.

🏆 **April 30 (Top Performer)**

185,017 impressions, 6,039 likes, 63,990 reach

📱 **Content Focus**

Mobile category dominated weekend content.

Question 3: Filter all the posts that were published on a weekend in March and April.

```sql
SELECT * FROM gdb0120.fact_content
join dim_dates using(date)
where weekday_or_weekend = "weekend" and
(month_name = "March" or month_name = "April")
```

Sunday posts were particularly effective. Weekend Reels consistently outperformed other formats.

Monthly Growth Trajectory

448,013
Total Profile Visits
Jan-Sep 2023

302,513
New Followers
67.5% conversion rate

55K
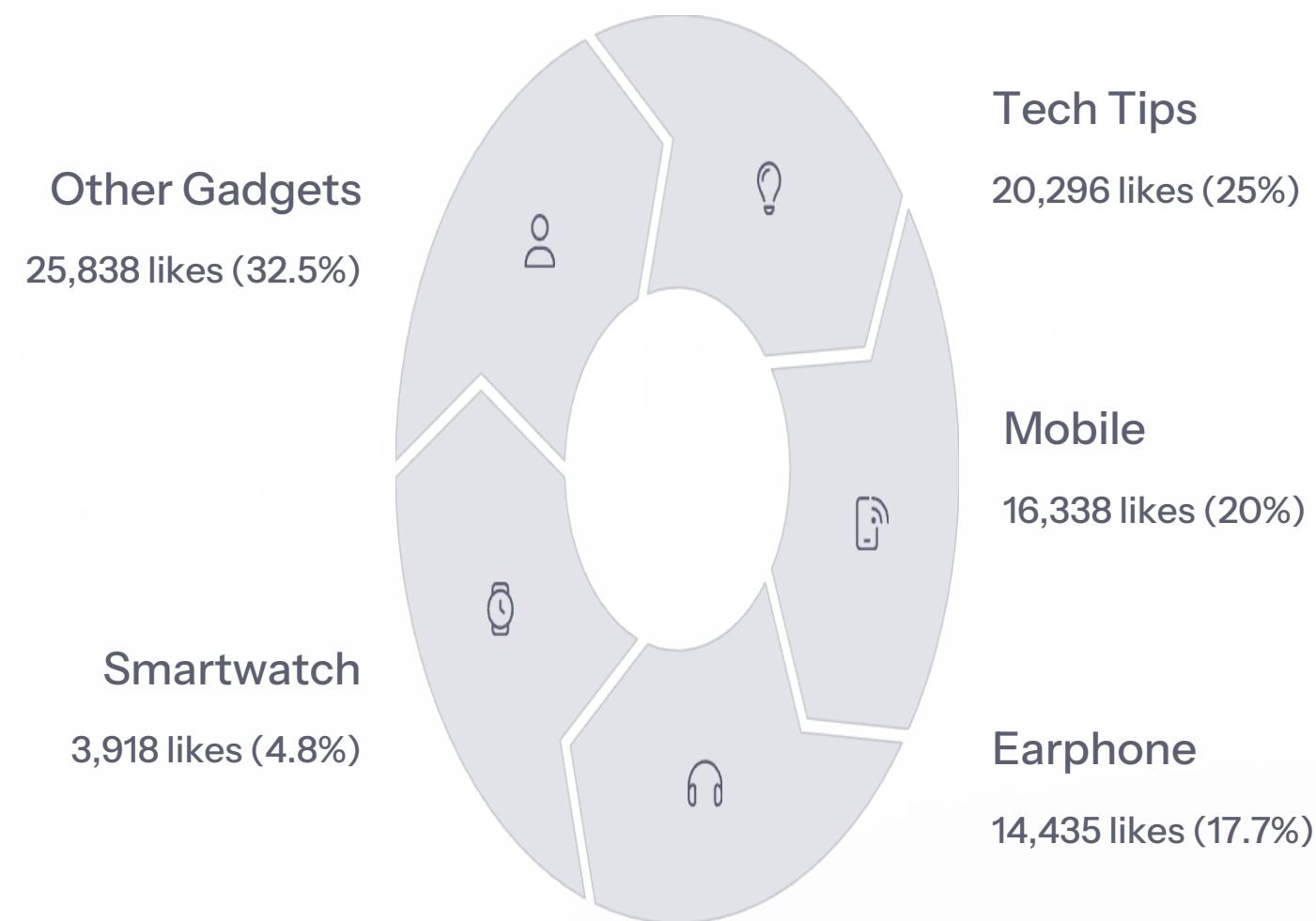### Peak Monthly Visits
May-June period

Question 4: Create a report to get the statistics for the account.

```sql
SELECT
    DATE_FORMAT(date, '%Y-%m-01') AS month,
    sum(profile_visits) as total_profile_visits,
    sum(new_followers) as total_new_followers
from fact_account
GROUP BY month
ORDER BY month;
```

Growth shows consistent upward pattern. May-June period delivered strongest performance.
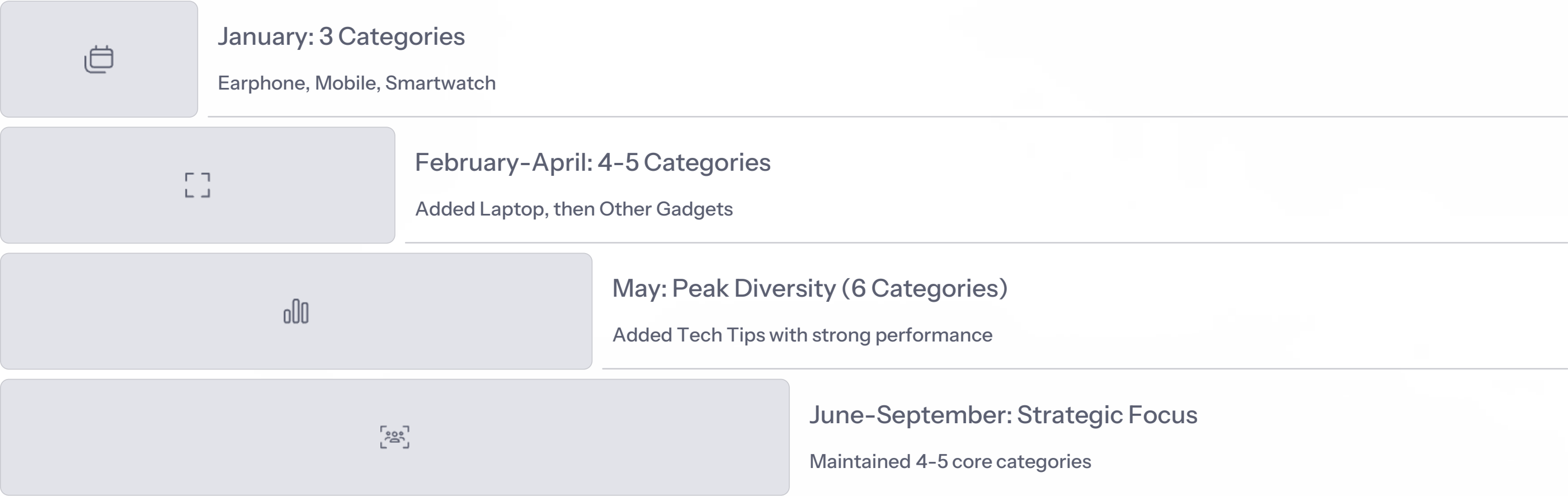
July 2023: Category Performance by Likes

Other Gadgets

25,838 likes (32.5%)

Tech Tips

20,296 likes (25%)

Mobile

16,338 likes (20%)

Smartwatch

3,918 likes (4.8%)

Earphone

14,435 likes (17.7%)

Question 5: Write a CTE that calculates the total 'likes' for each 'post_category' during 'July'.

```sql
with cte1 as (
    SELECT
        post_category,
        sum(likes) as total_likes
    FROM gdb0120.fact_content
    join dim_dates using (date)
    where month_name = "July"
    group by post_category
)

select * from cte1
order by total_likes desc
```

Hardware content dominates with 69.5% of engagement. Educational "Tech Tips" ranks second.
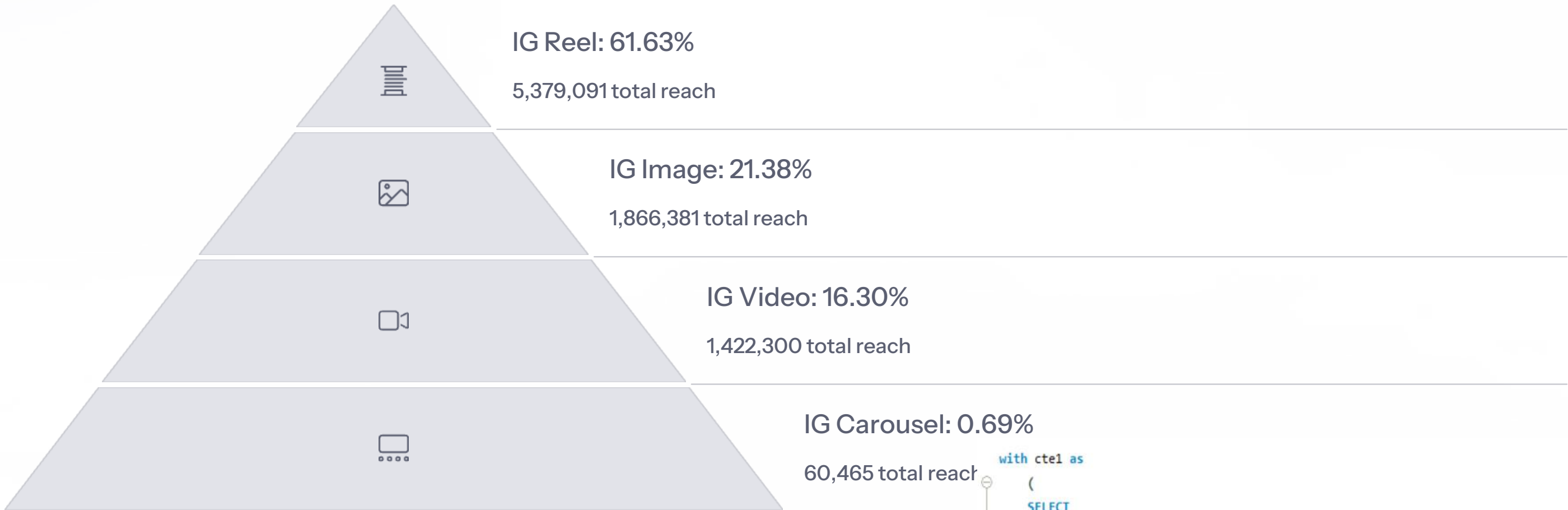
Content Diversification: Monthly Evolution

January: 3 Categories

Earphone, Mobile, Smartwatch

February-April: 4-5 Categories

Added Laptop, then Other Gadgets

May: Peak Diversity (6 Categories)

Added Tech Tips with strong performance

June-September: Strategic Focus

Maintained 4-5 core categories

Question 6: Create a report showing unique post_category names and counts by month.

```sql
with cte1 as
(
    SELECT month_name, post_category
        -- post_category,
    --     count((post_category)) as total_posts
    FROM gdb0120.fact_content
    join dim_dates using (date)
    )

select
    month_name,
    group_concat(distinct(post_category) separator " | ") as post_category_names,
    count(distinct(post_category)) as post_category_count
from cte1
group by month_name
```

Content strategy evolved strategically. May represents peak diversification.

Reach Distribution: Algorithm Preference

IG Reel: 61.63%

5,379,091 total reach

IG Image: 21.38%

1,866,381 total reach

IG Video: 16.30%

1,422,300 total reach

IG Carousel: 0.69%

60,465 total reach

Question 7: What is the percentage breakdown of total reach by post type?

Reels deliver 2.4x higher reach efficiency despite being only 25% of content volume.

```
with cte1 as
    (
    SELECT
        post_type,
        sum(reach) as total_reach
    FROM gdb0120.fact_content
    group by post_type
    )

select
    post_type,
    total_reach,
    round((total_reach * 100)/(select sum(total_reach) from cte1),2) as reach_percentage
from cte1
```

Quarterly Engagement Trends

Q2 shows peak engagement across most categories. Tech Tips consistently outperforms in saves.

Category	Quarter	Comments	Saves
Tech Tips	Q2	1,165	8,364
Mobile	Q2	768	5,951
Other Gadgets	Q3	702	4,823

Question 8: Create a report with quarter, total comments, and saves for each category.

```sql
SELECT
    post_category,
    CASE
        WHEN MONTH(date) IN (1, 2, 3) THEN 'Q1'
        WHEN MONTH(date) IN (4, 5, 6) THEN 'Q2'
        WHEN MONTH(date) IN (7, 8, 9) THEN 'Q3'
        WHEN MONTH(date) IN (10, 11, 12) THEN 'Q4'
    END AS quarter,
    SUM(comments) AS total_comments,
    SUM(saves) AS total_saves

FROM gdb0120.fact_content
GROUP BY
    post_category, quarter
ORDER BY
    post_category, quarter;
```

Viral Moments: Top Follower Acquisition Days

May 8: Absolute Peak

8,872 new followers

Coincided with viral tech comparison post

June 30: Month-End Spike

8,804 new followers

End-of-month content campaign success

June 3: Early Month Growth

8,802 new followers

New product announcement drove acquisition

February 1: Q1 Leader

4,106 new followers

Standout performance in slower growth period

Question 9: List the top three dates in each month with the highest number of new followers.

May-June period shows exceptional growth potential. Month-end content drives acquisition.

```sql
with cte1 as
(SELECT
    date,
    month_name,
    new_followers,
    row_number() over(partition by month_name order by new_followers desc) as rn
FROM gdb0120.fact_account
join dim_dates using (date)
)
select
    date,
    month_name,
    new_followers
from cte1
where rn <4
order by month(date)
```

Weekly Share Performance: Content Virality Analysis

Question 10: Create a stored procedure that takes the 'Week_no' as input and generates a report displaying the total shares for each 'Post_type'.

```
BEGIN
  /* 10. Create a stored procedure that takes the 'Week_no' as input
  and generates a report displaying the total shares for each 'Post_type'.
  The output of the procedure should consist of two columns:
  • post_type
  • total_shares  */

      declare week_num VARCHAR(10);
      SET week_num = CONCAT('W', input_week_no);

      SELECT
          post_type,
          sum(shares),
          week_no
      FROM gdb0120.fact_content
      join dim_dates using (date)
      where week_no = week_num
      group by week_no, post_type;
  END
```

- IG Reels are the most shared content in almost many weeks
- IG Reels account for the largest share with 59.84% in all weeks.

Key Insights & Future Analytics

Reels Dominate Reach

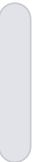61.6% of reach from Reels, yet optimization opportunity exists

Timing Matters
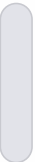
Q2 and weekend posting drive peak engagement

Educational Content Wins

"Tech Tips" shows highest audience value

Implement Real-Time Analytics

Monitor performance as content publishes

Develop Predictive Models

Forecast engagement based on content attributes

Establish Optimization Cycles

Monthly strategy refinement based on data

Thank You

Data-Driven Instagram Growth: From 302K Followers to Strategic Optimization

22M+ Impressions

Comprehensive analysis across all content

61.6% Algorithm Optimization

Identified for reach enhancement

67.5% Conversion Rate

From profile visits to followers

Available for follow-up questions and implementation support.