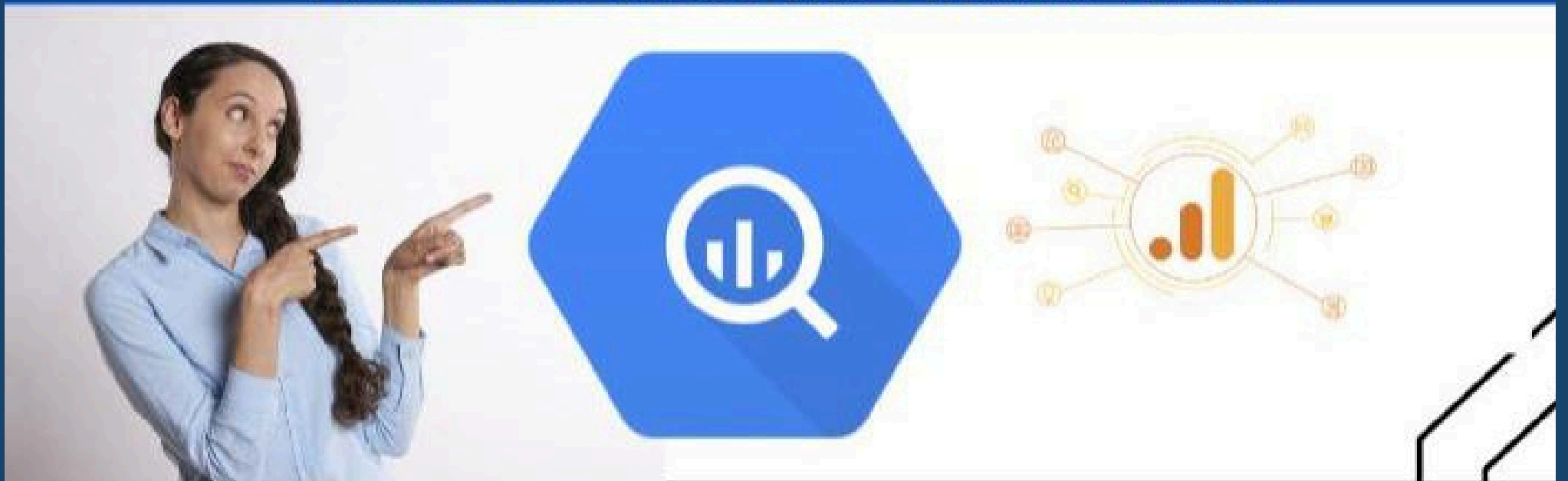


Optimizing Ecommerce Performance: A Data-Driven Case Study

GA4 DATA IN BIGQUERY

LEVERAGE THE POWER OF GA4 AND BIGQUERY FOR
YOUR BUSINESS AND MARKETING



SWIPE



The Challenge:

The eCommerce business faced declining conversion rates and was looking to optimize its user journey.

Key Goals:

Identify high-performing products, understand customer segments, and enhance the overall user experience.



KEEP SWIPING

Exploring the GA4 BigQuery Dataset

We began by exploring the GA4 dataset to understand user interactions on the site.

Key Tables:

events_, products_, sessions_, user_properties_

SAVE SHARE SCHEDULE MORE

This query will process 360.13 KB when run

SELECT * FROM ecommerce.Mobiles WHERE (CAST(SUBSTRING(Memory,1,length(Memory)-2) AS FLOAT64)>8) AND (RIGHT(Memory,2)="GB")

Press Alt+F1 for Accessibility Options

results

SAVE RESULTS EXPLORE DATA

INFORMATION

RESULTS

JSON

EXECUTION DETAILS

and	Model	Color	Memory	Storage	Rating	Selling_Price	Original_P
alme	X2 Pro	Red Brick	12 GB	256 GB	4.6	36999	36
alme	X2 Pro	Lunar White	12 GB	256 GB	4.6	35999	35
alme	X2 Pro	Concrete	12 GB	256 GB	4.6	36999	
alme	X2 Pro	Neptune Blue	12 GB	256 GB	4.6	35999	35
alme	X2 Pro	Lunar White	12 GB	256 GB	4.6	35999	
alme	X2 Pro	Neptune Blue	12 GB	256 GB	4.6	35999	
ro	X60 Pro	Midnight Black	12 GB	256 GB	4.4	54990	54
ro	X60 Pro	Shimmer Blue	12 GB	256 GB	5.0	48780	48
alme	GT Neo 2	Neo Black	12 GB	256 GB	4.4	35999	38
alme	GT Neo 2	Neo Blue	12 GB	256 GB	4.4	35999	38
alme	X50 Pro	Moss Green	12 GB	256 GB	4.3	47999	47
alme	X50 Pro	Moss Green	12 GB	256 GB	4.3	47999	
ro	X70 Pro	Cosmic Black	12 GB	256 GB	4.5	52990	57

Objective:

To extract meaningful insights from user behavior data.



Formulating Business Questions:

We translated the business goals into specific, measurable questions:

Questions:

1. What are the top-selling products by revenue?
2. Which marketing channels drive the most conversions?
3. How do users navigate the website?
4. Which products are frequently bought together?



KEEP SWIPING

Diving Into the Data:

Using SQL queries, we analyzed the GA4 BigQuery data to answer our key questions.

Example Query: Identifying top-selling products.

```
1 SELECT
2   MAX(items.item_name) AS top_product,
3   SUM(ecommerce.purchase_revenue) AS total_revenue
4 FROM
5   [ecommerce.events_*],
6   UNNEST(items) AS items
7 WHERE
8   event_name = 'purchase'
9 GROUP BY
10  items.item_id
11 ORDER BY
12   total_revenue DESC
13 LIMIT 10;
```



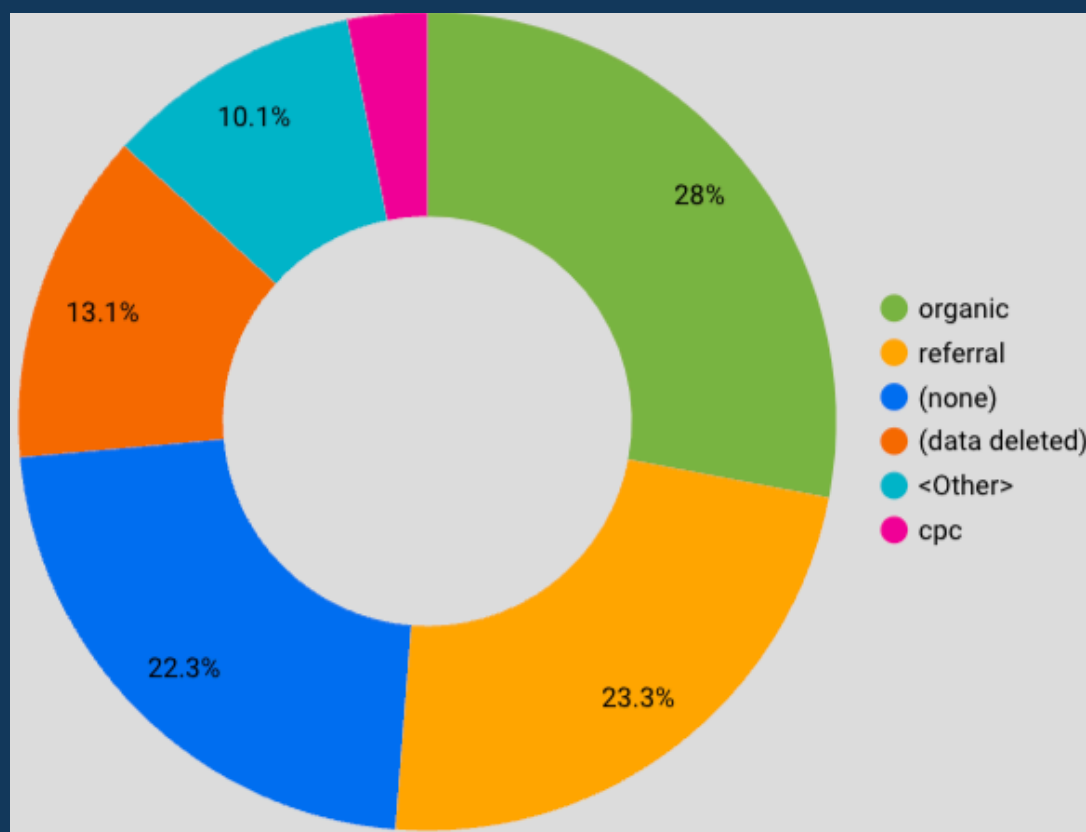
💡 We discovered the top 10 products contributing to 60% of revenue.

KEEP SWIPING

Diving Into the Data:

Example Query: Which marketing channels drive the most conversions?

```
1 SELECT
2   traffic_source.medium AS marketing_channel,
3   COUNTIF(event_name = 'purchase') AS conversions
4 FROM
5   [redacted] events_*
6 WHERE
7   _TABLE_SUFFIX BETWEEN '20210101' AND '20210131'
8 GROUP BY
9   marketing_channel
10 ORDER BY
11   conversions DESC
12 LIMIT 10;
13
```



💡 Organic Channel is the highest contributor with 28%

KEEP SWIPING

Insights:

1. High-performing products: Focus marketing efforts on these.
2. Most effective channels: Prioritize investment in channels driving conversions.
3. User navigation paths: Simplify the user journey to reduce drop-offs.

Actionable Recommendations

1. Boost the promotion of top-selling products through targeted campaigns.
2. Optimize landing pages for the most effective channels.
3. Redesign the user journey to enhance flow and reduce friction.

KEEP SWIPING

Conclusion: 🔍

By leveraging GA4 BigQuery data, we provided actionable insights that led to a 15% increase in conversion rates.

This case study highlights the power of data-driven decision-making in eCommerce.

Want to Learn More? 🚀

Connect with me for more insights on Digital Analytics and data-driven growth strategies.

Follow for more case studies and tips on optimizing your business with data.

KEEP SWIPING

Thank You for Reading!

I appreciate your time.
Let's stay connected!



COMMENT BELOW