

Marketing campaign Analysis

(POWER BI)

Executive Summary:

Designed for clarity and insight , this dashboard offers a dynamic view of campaign performance , and target Audience it highlights key metrics like total campaign , CTR , Conversion Rate (%), CPL , ... while providing a deep dive into campaign and advertisement across advertisement type , objectives and platforms , and change in conversions by month , which campaigns exceeded budget and cost a lot , using interactive visualizations . it empowers businesses to uncover audience and refine strategies .

Scope

Campaigns Analysis

- 1- **CTR (Click Through rate) = Total Clicks / Total Impressions**
- 2- **CPC (Cost Per Click) = Total Cost / Total Number Of Clicks**
- 3- **CPA (Cost Per Acquisition) = Total Advertisement Spend / The Number of Conversions.**
- 4- **Conversion Rate (%) = (Total Conversions ÷ Total unique Visitors) × 100**
- 5- **Engagement Rate (%) = avg (Engagement Rate)**
- 6- **CPL (Cost Per Lead (conversions)) = Total Marketing Cost / Number of Leads**
- 7- **Number of Advertisement and Campaigns by Platforms , Objective , Advertisement Type .**
- 8- **Cost by Platform ,Objective , Advertisement type**
- 9- **Which Campaign Caused a Higher Cost Than The Potential Budget?**
- 10- **Campaign by KPI.**

Audience Analysis

- 1- **Engagement Rate by gender ,age group ,region**
- 2- **conversation by gender ,age group ,region**
- 3- **reach by gender ,age group ,region**
- 4- **Engagement Rate by platform ,ad type , objective**
- 5- **conversation by platform ,ad type , objective**
- 6- **reach by platform ,ad type , objective**

Campaign Time Analysis

- 1- **CTR by month**
- 2- **change in conversations by Month**

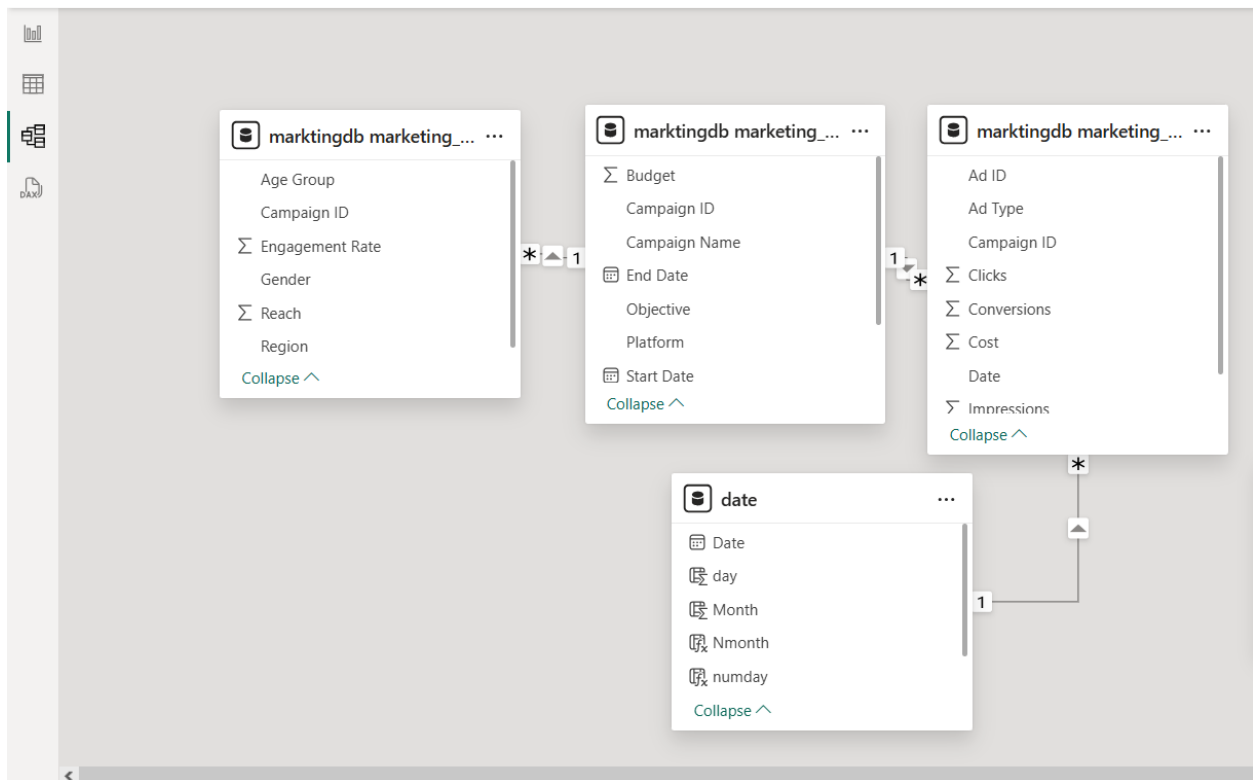
3- Conversions vs Cost by Month

Data Collection & Methodology:

- **Data source:** Data of xyz company for campaign (3 tables)(csv file).
- **Tools Used :** Power BI (power query , DAX) , My SQL Server .
- **Pre processing steps :**
 - 1- (replace values , change data type) when transform data.
 - 2- Update start date , end date of all campaigns .
 - 3- add new measures by Dax (total of campaign , CTR , CPC , CPA , Conversion Rate , Engagement Rate , CPL).
 - 4- create Date table for time analysis .

Data Model(table relations) :

all relation 1---->M



Data Analysis:

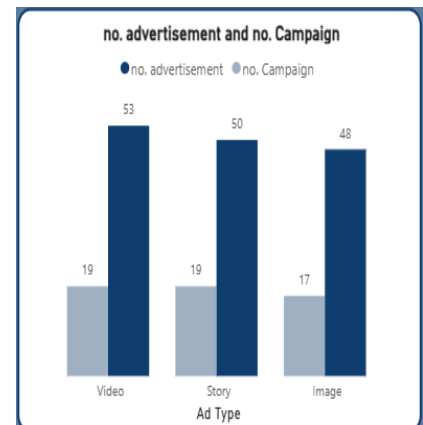
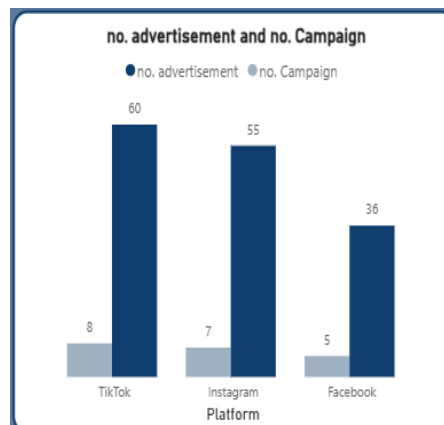
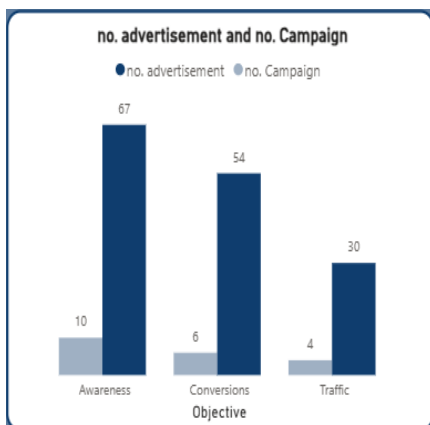
Campaigns Analysis

Insight:

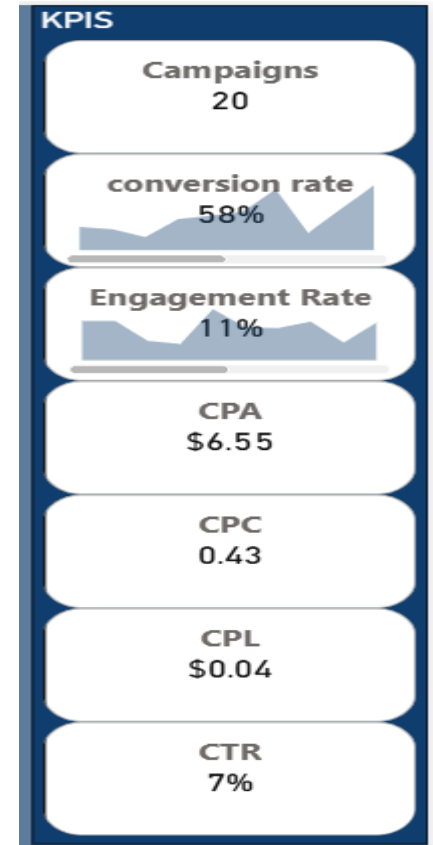
- 1- Total campaign in 2024 is **20**
- 2- Total Advertisement is **152**
- 3- **High** conversation rate **58%** however **high cost**
(A high conversion rate of 58% indicates strong performance in turning visitors into leads , CPA indicate that cost to turning visitors into leads are expensive)
- 4- A CTR of **7%** reflects **strong** ad creatives(Positive Signal)
- 5- **Low** CPL vs. **High** CPA
(The significant gap between CPL (**\$0.04**) and CPA (**\$6.55**) implies that a large number of leads are not converting to paying customers)
- 6- **Low** CPL vs. **High** CPA
(The large discrepancy between Cost Per Lead (CPL) at **\$0.04** and Cost Per Acquisition (CPA) at **\$6.55** suggests a significant drop-off between lead generation and actual customer)
- 7- **Strong** Engagement Rate (**11%**)

(Indicates that audiences are interacting with the content)

9-Number of Advertisement and Campaigns by Platforms , Objective , Advertisement Type?



Insight:

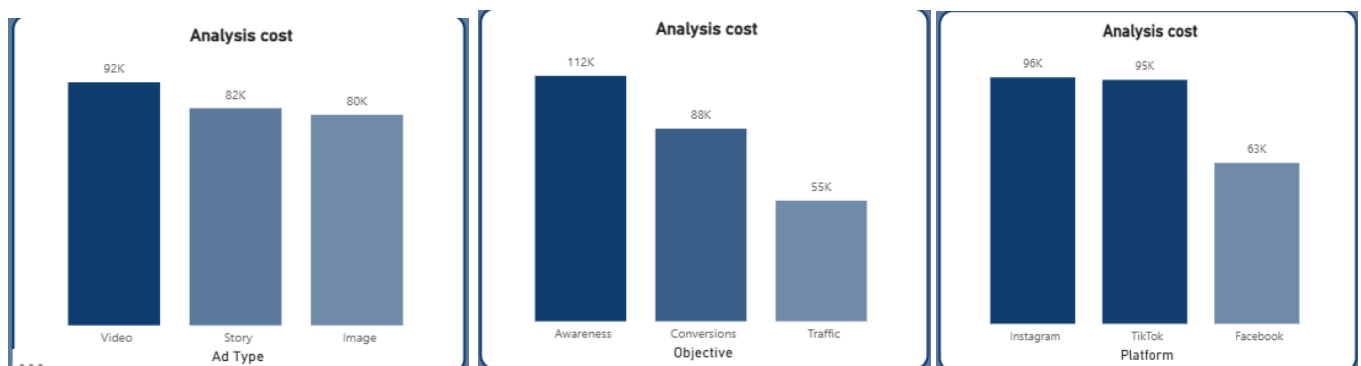


- 1- **main** goal of most campaigns was to make people **aware** of our service , **secondary** goals included driving **conversions** and generating **traffic** through user interactions .
- 2- **Tiktok** platform is **most popular** has 8 campaign and 60 Advertisement then **Instagram** has 7 campaign and 55 Advertisement **unlike Facebook** (hosted fewer campaigns and ads).
- 3- **video and story** are more **attractive** type of Advertisement so most of campaign use it .

Recommendations:

- 1- Continue prioritizing awareness-driven campaigns, but ensure clear tracking of how awareness translates to engagement and conversions.
- 2- Test Facebook with different formats or messages .
- 3- prioritize these formats in future campaigns — especially for awareness and traffic objectives.

10-Cost by Platform ,Objective , Advertisement type?



Insight:

- 1- We said that video and story is most type used in our campaign

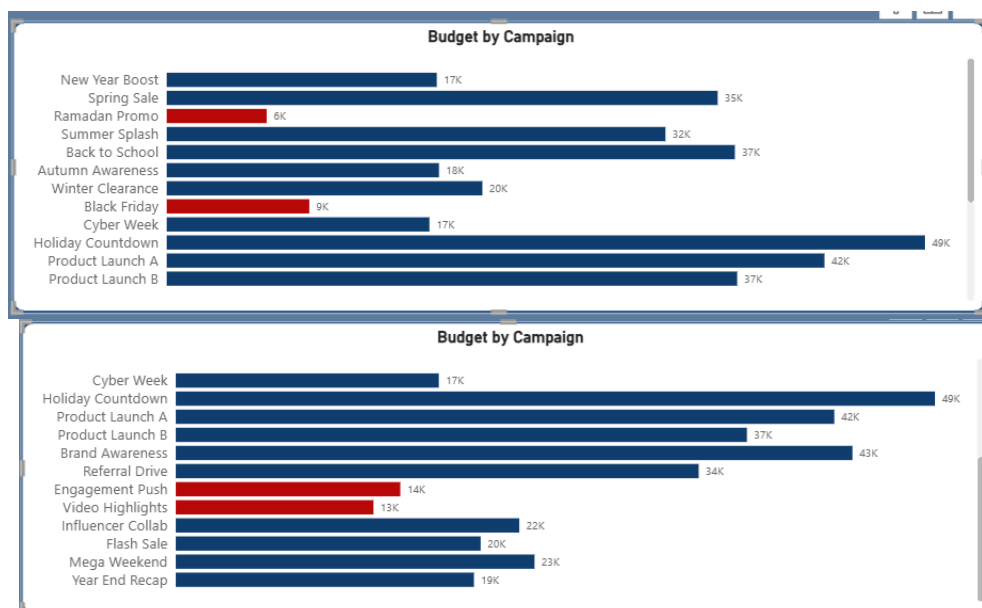
But **video cost more than story** where(video cost ~ 1735 , story ~ 1640)

- 2- As while as most of campaigns main goal was awareness so it is more cost
- 3- Advertisement in instagram and tiktok are cloasly cost beacause most of campaigns where in this two platforms.

Recommendations :

- 1- Use story ads as a cost-effective alternative in campaigns where high production value isn't necessary.
- 2- Since awareness campaigns are costlier, set clear benchmarks for engagement and post-awareness conversions.
- 3- rack cost per engagement/conversion by platform to determine which yields better returns.

11-Which Campaign Caused a Higher Cost Than The Potential Budget?



Insight:

- 1- A total of 4 campaigns exceeded their predicted budgets, indicating potential issues with budget planning, cost control, or campaign scope expansion during execution.

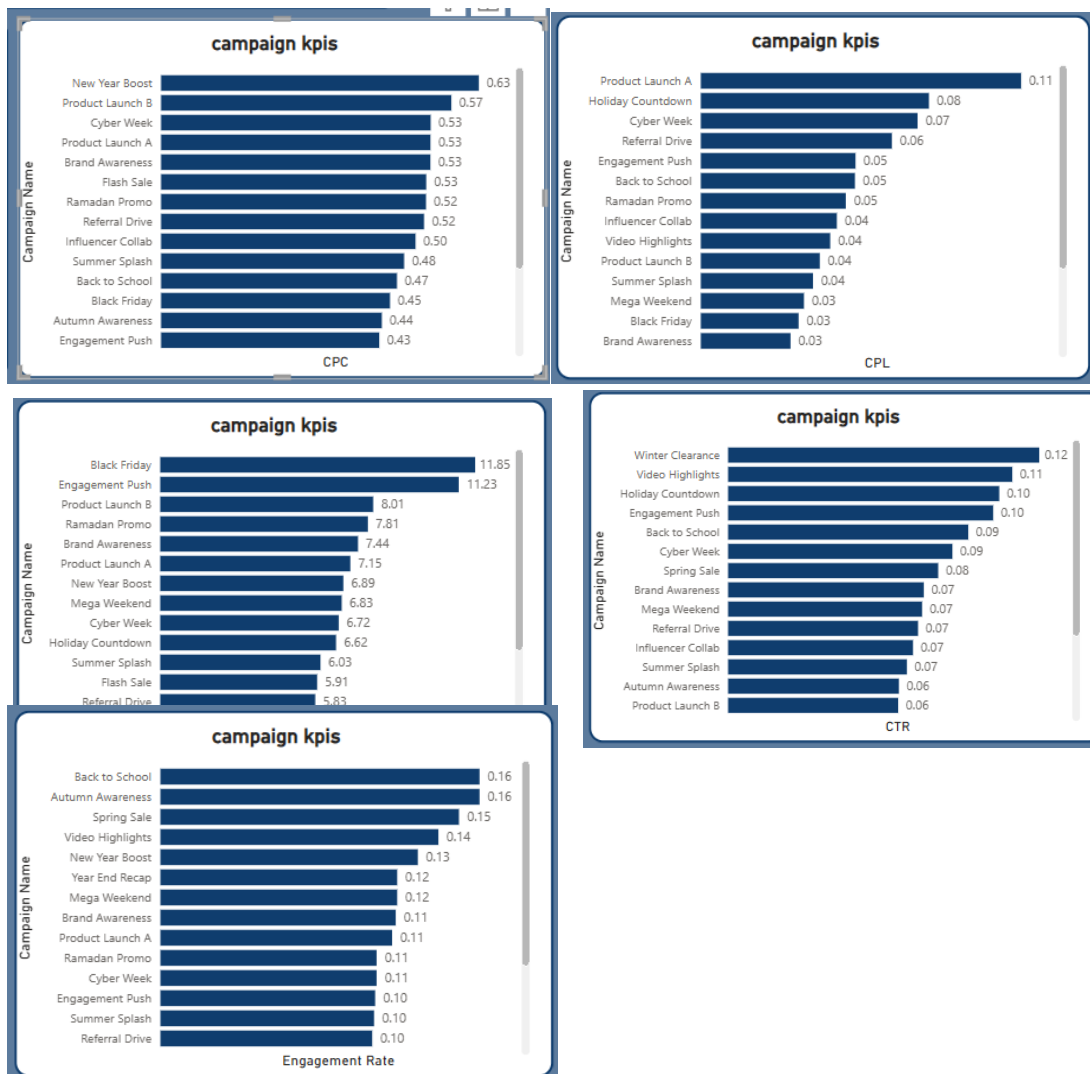
Over-Budget Campaigns:

- 1- Ramadan Promo (Campaign 3)
- 2- Black Friday (Campaign 8)
- 3- Engagement Plus (Campaign 16)
- 4- Video Highlights (Campaign 17)

Recommendations :

- 1- Instead of fixed budgets, define a flexible range for high-impact campaigns.
- 2- Set alerts or thresholds to flag when a campaign reaches 80–90% of its allocated budget.

12-Campaign by KPI.



insights:

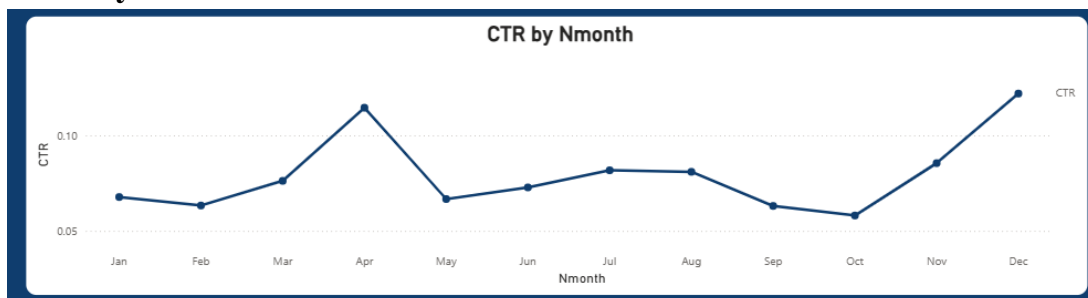
- 1- **winter clearance** campaign has most CTR regarded to outhur campaign(0.12).
- 2- **back to school** campaign has most Engegement rate regarded to outhur campaign(0.16).
- 3- **black friday** campaign has most cpa regarded to outhur campaign(11.85)
- 4- **new year boost** campaign has most CPC regarded to outhur campaign(0.63).
- 5- **Product launch A** campaign has most CPL regarded to outhur campaign(0.11).

Recommendations :

- 1- Reassess the conversion funnel and targeting strategy of the Black Friday campaign to reduce CPA during high-cost periods.
- 2- Explore the lead qualification and targeting approach in Product Launch A to reduce CPL without sacrificing quality.

Campaign Time Analysis

1- CTR by month



Insights :

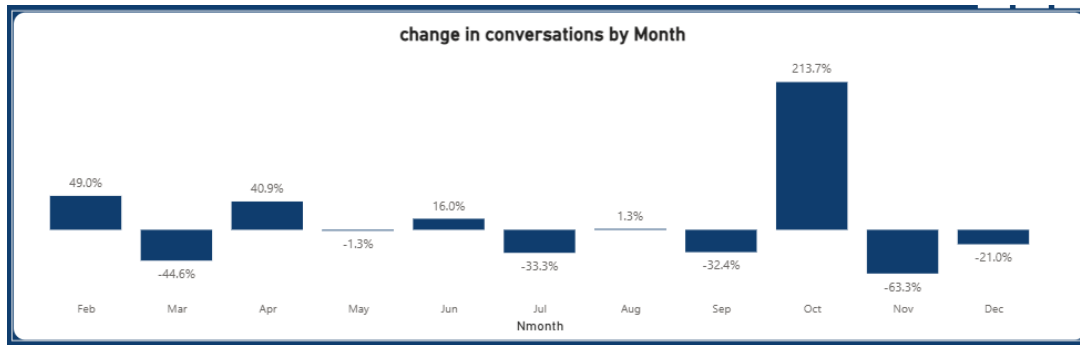
Jan - Apr: CTR showed a steady increase (reflecting effective ad engagement strategies in Q1)

- Apr– May :CTR **noticeable drop** (may be attributed to reduced audience interest)
- May– Oct : CTR **not stable some time increase ,some time decrease** (highlighting the need for better targeting or creative testing)
- Oct - Dec : CTR **highly Increase** (refined targeting and optimized content formats.)

Recommendations:

- 1- Analyze Drop Causes (Apr–May).
- 2- Study and replicate the successful elements of high-performing end-of-year campaigns.

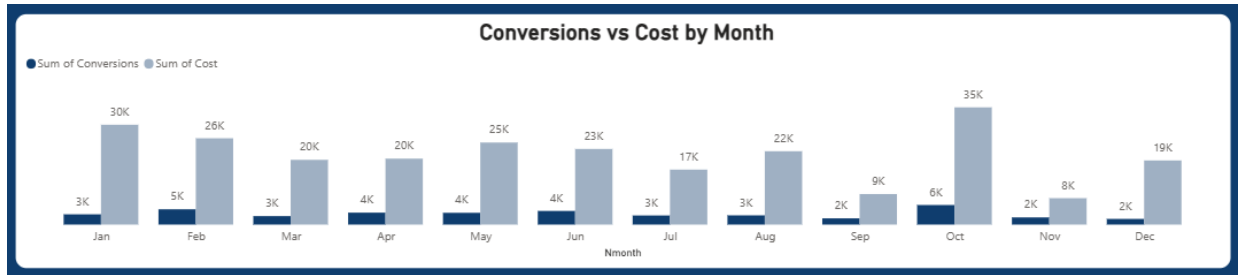
2- change in conversations by Month



Insights :

- 1- The conversion performance was **highly volatile**, with alternating increases and decreases throughout the year.
- 2- **Q1** and **Q2** showed **significant swings**, with sharp declines in February and June, and rebounds in April and May.
- 3- **Q3** (Jul–Sep) **was mostly flat** or declining.
- 4- **October** saw a **dramatic spike** in conversions (+213.7%).
- 5- **Q4 dropped steeply** again, especially in November (-63.4%).

3- Conversions vs Cost by Month



Insights :

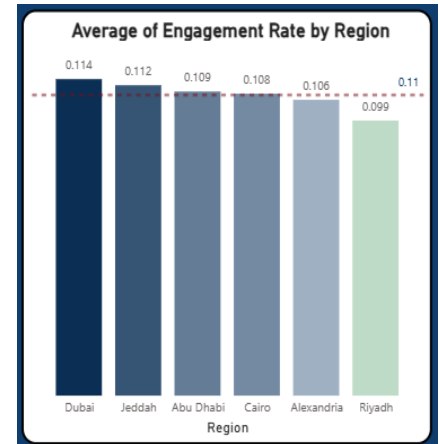
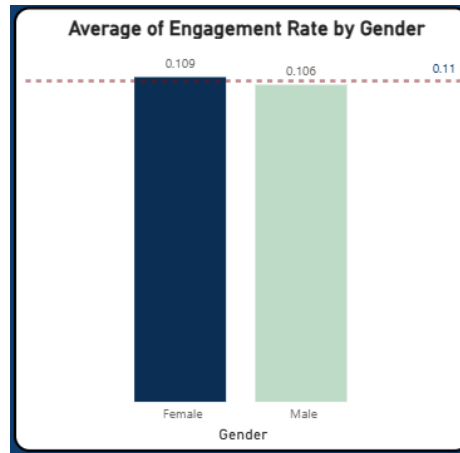
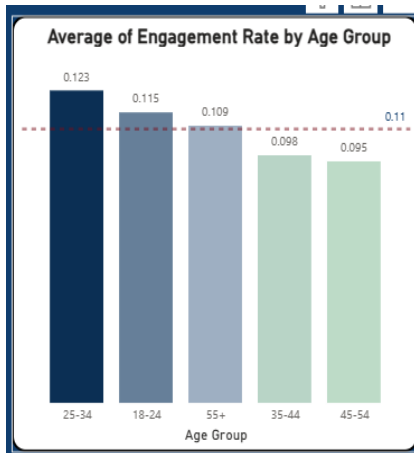
- 1- **October** recorded the **highest number** of conversions and the highest spend.
- 2- **January – Strong Start** to the Year (Although spend in January was high, conversions were half of October)
- 3- **Feb, May, Jun, Aug** these months performed **relatively well**, showing stable investment and returns.
- 4- **Low Conversion Months** **Mar, Apr, Jul, Sep, Nov, Dec**

Recommendations:

- 1- Replicate the strategies used in October.
- 2- Feb, May, Jun, and Aug. Test new creatives or formats to move these months.
- 3- Perform post-campaign diagnostics.

Audience Analysis

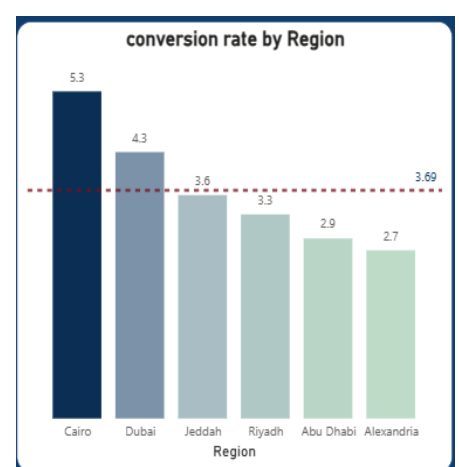
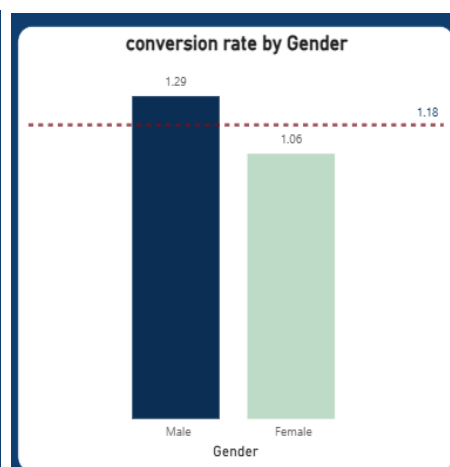
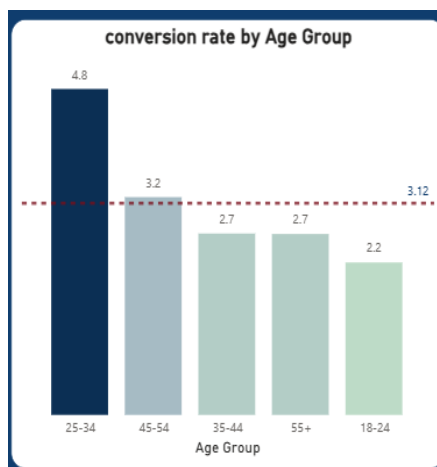
- 1-Engagement Rate by gender ,age group ,region:



Insight:

- 1- The **25-34 age** group showed the **highest** engagement rate with advertisements at **0.123**.
- 2- Engagement rates between males (0.109) and females (0.109) **were nearly identical**.
- 3- **Dubai** recorded the **highest** engagement rate among all cities at 0.114.

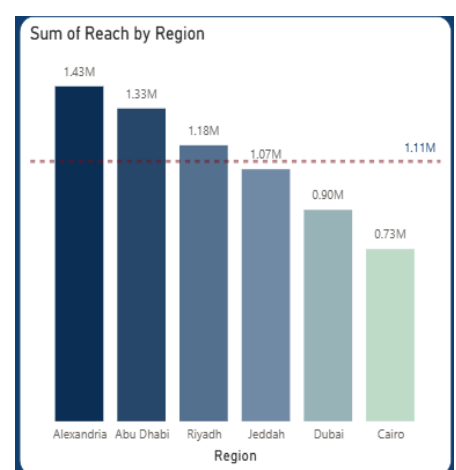
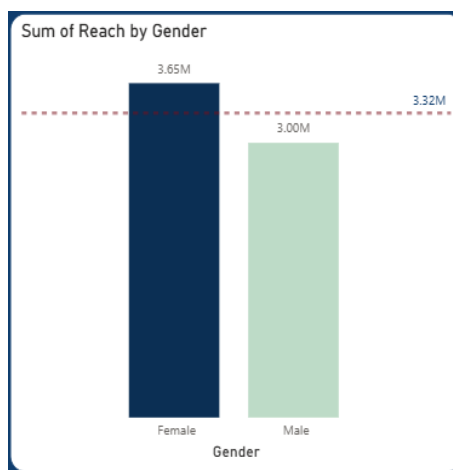
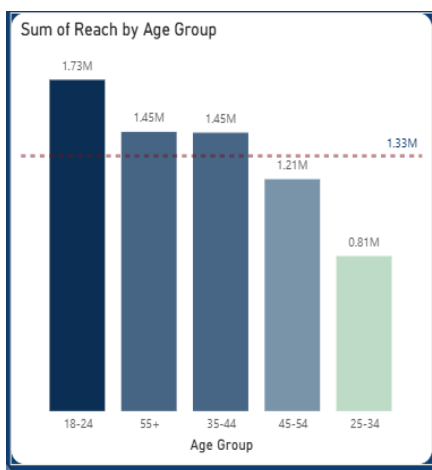
1- conversation by gender ,age group ,region



Insight:

- 1- The **25–34 age** group achieved the **highest** number of conversions (4.8), confirming that this segment is not only more engaged but also more likely to take action.
- 2- **Males** (1.29) showed **higher** conversion levels compared to **females** (1.06), indicating a stronger purchase or inquiry intent.
- 3- **Cairo** led all regions with the **highest** conversion volume (5.3).

2- reach by gender ,age group ,region



Insight:

- 1- The **18–25** age group recorded the **highest reach** at 1.73 million, indicating broad exposure but potentially **lower engagement or conversion compared to other segments**.
- 2- The **55+ and 35–44** age groups both had **strong reach** figures of 1.45 million, suggesting that campaigns successfully captured attention across both younger and older demographics.
- 3- **Females** reached **more than males**.
- 4- **Alexandria** led in audience reach with 1.43 million.

Recommendations :

- 1- Prioritize 25–34 in budget allocation and message targeting, as they deliver the best balance between reach and ROI.

- 2- While the 18–25 group had the highest reach (1.73M), the 25–34 group demonstrated the highest engagement (0.123) and conversions (4.8).

Recommendation: Prioritize 25–34 in budget allocation and message targeting, as they deliver the best balance between reach and ROI.

- 3- ? These groups have strong reach (1.73M and 1.45M respectively) but lower conversion rates.

Recommendation: Use retargeting ads, educational content

- 4- ? Females reached more (3.65M) but males converted more (1.29 vs 1.06).

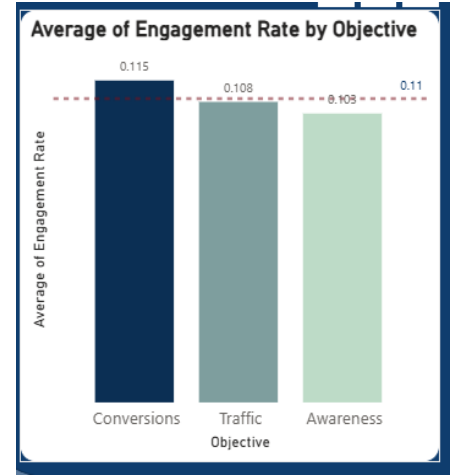
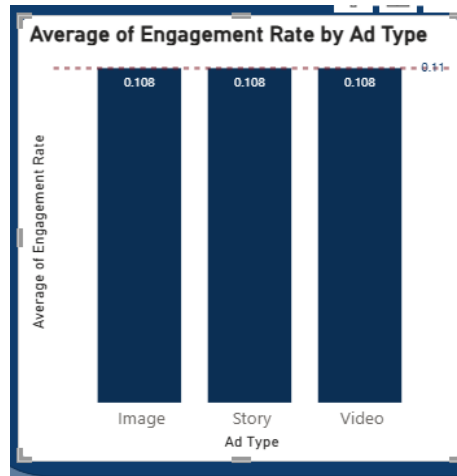
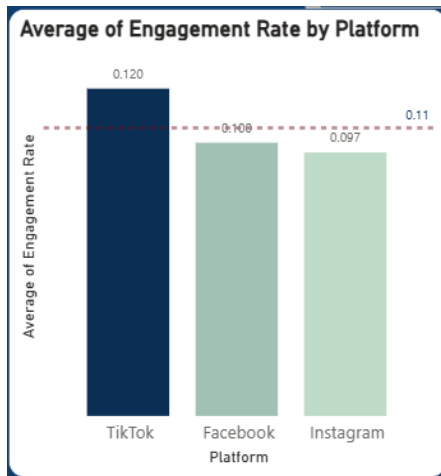
Recommendation: Continue with balanced targeting

- 5- Alexandria, Abu Dhabi, and Riyadh had the highest audience reach, while Cairo had the highest conversions (5.3).

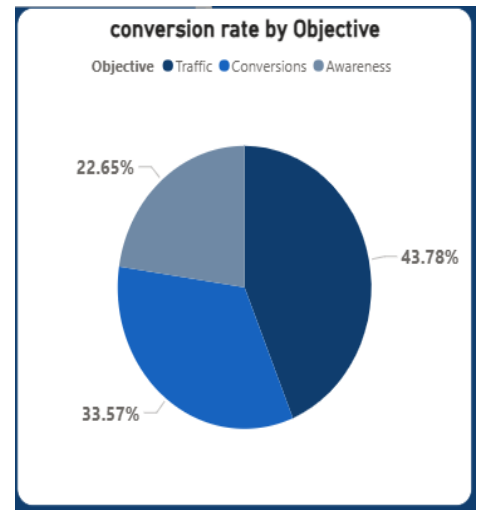
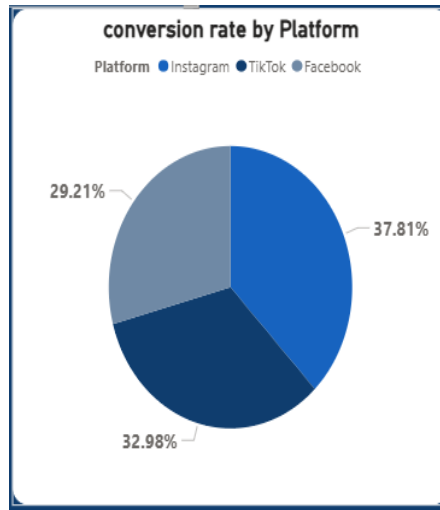
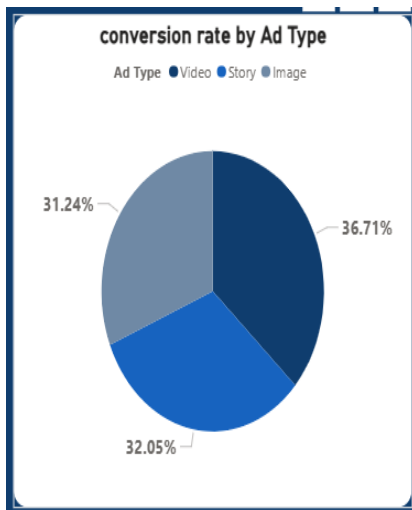
Recommendation:

- 1- Strengthen presence in Alexandria with call-to-action (CTA)-focused campaigns.
- 2- Use geo-targeted creatives and localized messaging in Cairo to reinforce conversion performance.
- 3- Test conversion-focused ads in Abu Dhabi and Riyadh to convert existing high reach into actions.

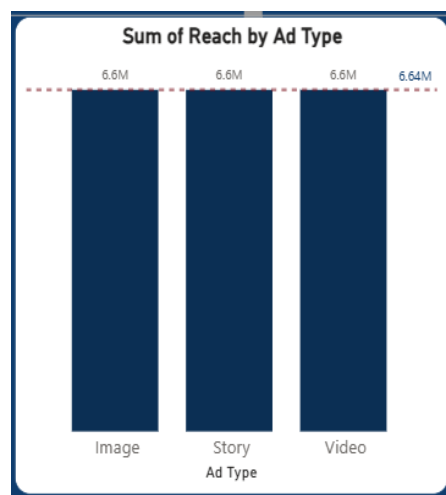
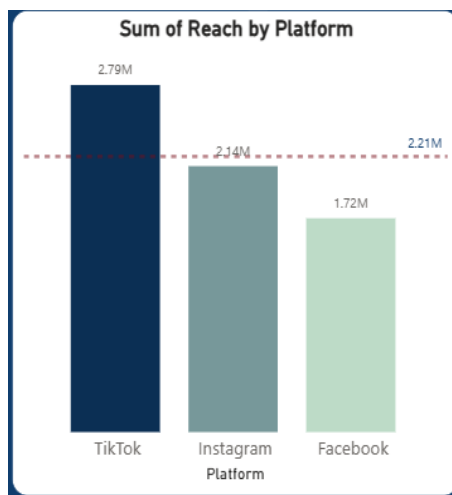
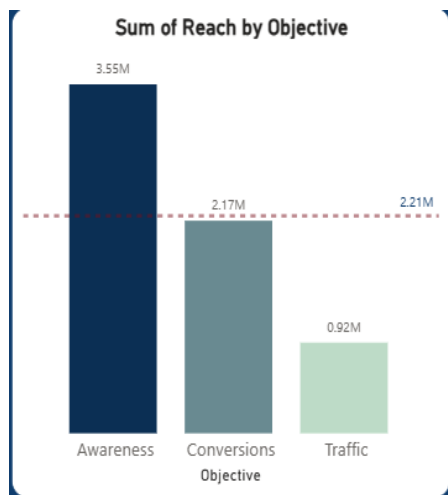
6-Engagement Rate by platform ,ad type , objective



4-conversion by platform ,ad type , objective



5-reach by platform ,ad type , objective



Insights:

Platform Performance

- **TikTok** had the **highest reach** (2.79M) and **engagement rate** (0.120).
- **Instagram** led in **conversion rate** (37.81%), followed by TikTok and Facebook.
- Facebook performed moderately across all metrics.

Ad Type Performance

- **Engagement was consistent** across all formats: image, story, and video (~0.108).
- **Video** ads achieved the **highest conversion rate** (36.71%), followed by story and image.
- **Total reach was nearly equal across ad types** (6.6M), indicating format doesn't strongly affect reach.

Campaign Objective Performance

- **Awareness** campaigns had the **widest reach** (3.55M).
- **Traffic**-focused campaigns generated **the highest** conversion share (43.78%).
- **Conversation** campaigns had the **highest** engagement rate (0.115)

Recommendations:

- 1- Use TikTok for awareness and engagement due to its broad reach and interactive audience.**
- 2- Prioritize Instagram for conversion-focused campaigns, especially with video content.**
- 3- Use Facebook to complement campaigns, especially for older demographics or retargeting.**
- 4- Run awareness campaigns at the top of the funnel using TikTok to maximize exposure.**
- 5- Focus on video ads for conversion-driven campaigns.**

“ This analysis helped us understand which platforms, ad types, and audiences performed best in 2024. TikTok had the highest engagement, Instagram led in conversions, and video ads drove the most actions.

These insights will guide better planning and more effective campaigns in 2025. ”

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Github : <https://github.com/DohaMasoud>