#### MARKETING DATA ANALYSIS REPORT

#### INTRODUCTION

#### **OBJECTIVE**

The objective of this analysis is to extract insightful data from a campaign marketing dataset through SQL. The analysis focuses on campaign performance, audience engagement, and cost effectiveness as drivers of decision-making based on data.

#### **DATA OVERVIEW**

The dataset contains marketing campaign performance data with key metrics in the following categories:

# 1. Campaign Performance

Campaign\_ID: Unique identifier for each campaign

Impressions: Frequency with which the ad was shown

Clicks: Frequency with which users clicked on the ad

ROI: Campaign Return on Investment

### 2. Audience & Engagement

Target Audience: Target audience for the campaign

Engagement Score: A metric of user engagement with the campaign

#### 3. Cost & Conversion Metrics

Acquisition Cost: Cost of customer acquisition

Conversion\_Rate: Proportion of users who made the desired action

CTR (Click-Through Rate): Clicks divided by impressions

Total Conversions: Number of successful conversions

#### 4. Channel Effectiveness

Channel Used: Marketing channel utilized (e.g., social media, email)

Location: Geographical location where the campaign was executed

#### **KEY QUESTIONS**

This report provides answers to the following questions:

- Which campaign generated the most impressions?
- Which of the campaigns offered the highest ROI?
- What are the top three spots with the largest impressions?
- Which of the target audiences yielded the most average engagement score?
- What is the overall Click-Through Rate (CTR)?
- Which of the campaigns were most cost-efficient?
- Which of the campaigns have a CTR larger than some given value?
- How do different marketing channels compare when ranking by total conversions?

#### **DATA ANALYSIS & INSIGHTS**

#### **Total Impressions by Campaign**

Insight:

• Campaigns recorded a wide range of impressions, with the **highest totaling 10,000** and the **lowest at 1,000**, indicating significant variation in campaign reach.

# Campaign with the Highest ROI

Insight:

• The **NextGen Systems** campaign achieved the **highest ROI of 8**, indicating strong performance in converting marketing investment into returns.

#### **Top 3 Locations with the Most Impressions**

Insight:

• New York recorded the highest number of impressions (221,359,756), followed closely by Miami (221,347,726) and Chicago (219,999,352). This suggests that these cities had the strongest reach or audience exposure during the campaign.

# **Average Engagement Score by Target Audience**

Insight:

•18-24-year-old males had the highest average engagement score of 5.52, while other age and gender groups recorded an average score of 5.49. This suggests that this demographic was the most engaged with the campaign, although the differences are relatively small, indicating similar levels of engagement across other groups.

#### **Total Click-Through Rate (CTR)**

### Insight:

• The **total Click-Through Rate (CTR)** for all campaigns was **9.98%**, indicating a strong overall performance in terms of generating clicks relative to impressions across the campaigns.

# **Most Efficient Campaign**

Insight:

•The most efficient campaign was Alpha Innovations, with a cost per conversion of 33,346, indicating that this campaign achieved conversions at a relatively lower cost compared to others.

# Campaigns with CTR Greater than or Equal to a Threshold

Insight:

Using a CTR threshold of 5%, we identified campaigns that significantly outperformed others in terms of user engagement.

The campaigns with the **highest CTRs** were:

- Alpha Innovations 99.20% (Campaign ID: 26330)
- TechCorp 99.20% (Campaign ID: 122375)

These two campaigns achieved **exceptionally high engagement**, far surpassing the industry benchmark and indicating highly effective targeting and messaging strategies.

## **Ranking Channels by Total Conversions**

Insight:

Email emerged as the most effective marketing channel, generating a total of 2,697 conversions and ranking first overall. In comparison, Facebook ranked sixth with 2,625 conversions, despite its typical prominence in digital advertising strategies. While the margin between the two is relatively small, Email's performance highlights its strength as a high-converting and cost-effective channel.

#### **CONCLUSION & RECOMMENDATIONS**

#### SUMMARY OF KEY FINDINGS

1. New York had the highest impressions, and therefore it an ideal location for targeted

marketing campaigns.

- 2. NextGen Systems provided the highest ROI, which is proof of successful campaign strategies.
- 3. Men between 18-24 were most active, and therefore advertisements should be directed towards this group more.
- 4. Alpha Innovations was the most cost-efficient campaign, indicating successful spending.
- 5. Email had the highest total conversions, and therefore it is the highest-performing marketing channel.

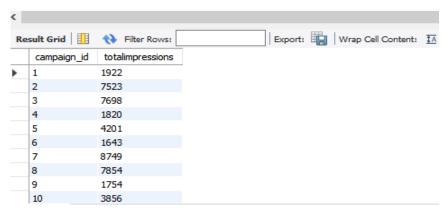
#### RECOMMENDATION

- 1. Spending more on high-ROI campaigns like NextGen Systems.
- 2. Campaign target to New York and Miami, where the highest impressions are achieved. 3. Targeting engagement strategies for young male demographics (18-24) who interact the most. 4. Scalable email marketing efforts because it is the most powerful channel for conversions. 5. Monitor Facebook AD performance and rank Facebook higher in conversions. LIMITATIONS & FUTURE WORK
- Future analyses should explore A/B testing to measure the impact of AD creatives on engagement.
- Additional cost-benefit analysis could refine campaign spending strategies.

# **APPENDIX: SQL QUERIES & OUTPUT**

Query 1: Calculate Total Impressions for Each Campaign

```
1 • SELECT campaign_id, SUM(impressions) AS totalimpressions
2  FROM campaigns
3  GROUP BY campaign_id
4
```

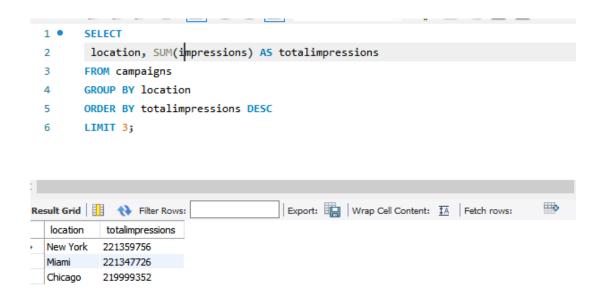


Query 2: Identify the Campaign with the Highest ROI

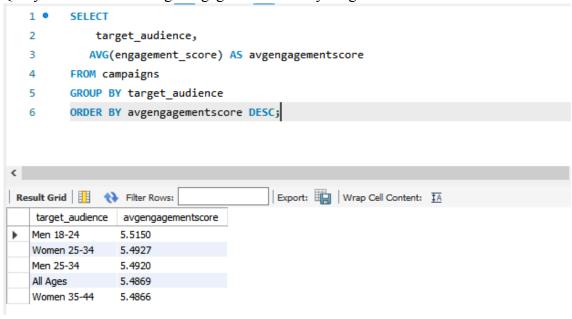
```
1 • SELECT campaign_id ,company,roi
2 FROM campaigns
3 ORDER BY roi DESC
4 LIMIT 1;
5
```



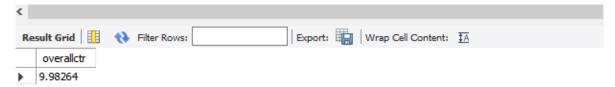
Query 3: Find the Top 3 Locations with the Most Impressions



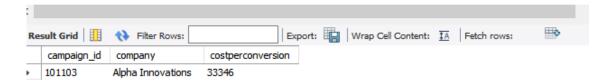
Query 4: Calculate Average Engagement Score by Target Audience



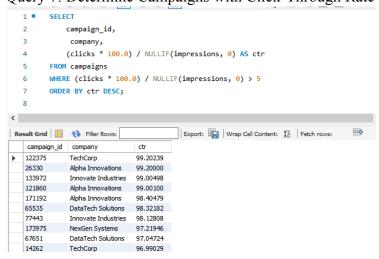
### Query 5: Compute the Overall CTR (Click-Through Rate)



# Query 6: Determine the Most Cost-Effective Campaign



# Query 7: Determine Campaigns with Click-Through Rate Greater than a Threshold



# Query 8: Rank Channels by Total Conversions

```
1 •
        SELECT
  2
            {\sf channel\_used,}
            sum(conversion_rate) AS totalconversions
  3
        FROM campaigns
  4
        GROUP BY channel_used
  5
        ORDER BY totalconversions DESC;
  6
  7
                                        Export: Wrap Cell Content: IA
channel_used totalconversions
  Email
              2697.38
  Google Ads
              2681.24
  Website
              2674.95
  YouTube
              2667.76
  Instagram
              2667.57
           2625.27
  Facebook
```