Marketing Campaign SQL Analysis Report

Introduction

This report presents an analysis of marketing campaign data using PostgreSQL. The objective was to extract key insights, optimize campaign performance, and document the SQL queries used to achieve these insights.

Data Overview

The dataset contains marketing campaign details, The table used for analysis is campaigndata with the following columns:

- Campaign_ID
- Company
- Campaign_Type
- Target_Audience
- Duration
- Channel_Used
- Conversion_Rate
- Acquisition_Cost
- ROI
- Location
- Date
- Clicks
- Impressions
- Engagement_Score
- Customer_Segment

SQL Queries and Insights

Each query was designed to answer a specific business question related to marketing performance.

1. Total Impressions for Each Campaign

campaign_id [PK] integer	totalimpressions integer
1	1922
2	7523
3	7698
4	1820
5	4201
6	1643
7	8749
8	7854
9	1754
10	3856
11	6628
12	8948

Insight: The campaign with ID 1 had the highest number of impressions, indicating strong visibility.

2. Campaign with Highest ROI

campaign_id [PK] integer	company text	roi numeric (5,2)
168	NexGen Systems	8.00

Insight: NexGen Systems had the highest ROI, suggesting their campaign was highly effective in generating returns.

3. Top 3 Locations with the Most Impressions

location text	totalimpressions bigint
New York	221359756
Miami	221347726
Chicago	219999352

Insight: New York, Miami, and Chicago had the highest engagement, suggesting targeted campaigns in these areas could be beneficial.

4. Average Engagement Score by Target Audience

target_audience text	avgengagementscore numeric
Men 18-24	5.5150152760873345
Women 25-34	5.4927398595456477
Men 25-34	5.4919798121127324
All Ages	5.4868693935683766
Women 35-44	5.4865702479338843

Insight: Engagement scores are relatively consistent across target audiences, indicating a balanced campaign reach.

5. Overall CTR

overallctr numeric
9.98

Insight: The overall Click-Through Rate (CTR) is 9.98%, which is a strong indicator of audience interaction with the campaigns.

6. Most Cost-Effective Campaign

campaign_id [PK] integer	company text	costperconversion numeric
101103	Alpha Innovations	33346.666666666667

Insight: Alpha Innovations had the lowest cost per conversion, making it the most cost-effective campaign.

7. Campaigns with CTR Above a Threshold

campaign_id [PK] integer	company text	ctr numeric
1	Innovate Industries	26.33
3	Alpha Innovations	7.59
4	DataTech Solutio...	11.92
5	NexGen Systems	9.02
6	DataTech Solutio...	6.09
7	NexGen Systems	9.34
8	DataTech Solutio...	7.94
9	Alpha Innovations	49.09
10	TechCorp	16.65
12	Innovate Industries	7.36

Insight: These campaigns achieved strong engagement, exceeding the 5% threshold for CTR.

8.Rank Channels by Total Conversions

channel_used text	totalconversions numeric
Email	2697.3800
Google Ads	2681.2400
Website	2674.9500
YouTube	2667.7600
Instagram	2667.5700
Facebook	2625.2700

Insight: Email marketing had the highest conversion rate, followed closely by Google Ads and website campaigns.

Recommendations

1. **Increase Investment in High-Performing Channels**
   Email and Google Ads generated the highest conversions. Future campaigns should allocate more budget to these channels.

2. **Optimize Campaigns for High CTR**
   Campaigns with CTR above 5% performed well. A/B testing and content optimization can improve CTR further.

3. **Target High-Performing Locations**
   New York, Miami, and Chicago had the highest impressions. Expanding marketing efforts in these areas could yield better results.

4. **Improve Cost Efficiency**
   Alpha Innovations achieved the lowest cost per conversion. Analyzing their approach can help optimize costs across campaigns.

Conclusion

This analysis provided key insights into marketing campaign performance, identifying high-ROI campaigns, cost-effective strategies, and optimal target audiences. The results can help in refining future marketing efforts for better efficiency and effectiveness.