

Marketing Campaign Analysis and Insights Project

1. Objective

This project aims to evaluate the effectiveness of marketing campaigns by using SQL for data analysis and Power BI for visualizations. Learners will explore various campaign types, target audiences, channels, and key performance metrics such as ROI and conversion rates.

By the end of this project, learners will:

- ☒ Conduct exploratory data analysis (EDA) to uncover trends and patterns in marketing campaigns.
- ☒ Evaluate campaign performance using SQL-based analysis.
- ☒ Create dynamic Power BI dashboards to visualize key performance indicators (KPIs) and trends.
- ☒ Provide actionable insights and recommendations to optimize marketing strategies.

2. Project Overview

The dataset includes detailed information about marketing campaigns, including campaign types, target audiences, channels used, and performance metrics like ROI, conversion rates, and engagement. The goal of this analysis is to assess which campaigns have been the most effective and identify areas for improvement.

Learners will:

- Import and preprocess the dataset using SQL.
- Analyze and clean the data to ensure consistency.
- Create new features and metrics for in-depth insights.
- Visualize campaign performance using Power BI and generate actionable recommendations for optimization.

3. Dataset Details

- **Dataset Name:** Marketing Campaign Dataset
 - **Dataset Name:** Financial Reporting and Analysis
- Dataset Link:** Click Here for [CSV File](#) or [XLSX File](#)
- Total Records:** 20,0000

- **Columns Overview:**
 - **Campaign Details:**
 - **Campaign_ID:** Unique identifier for each campaign.
 - **Company:** The company running the campaign.
 - **Campaign_Type:** The type of campaign (e.g., Email, Social Media, etc.).
 - **Target_Audience:** The target demographic group.
 - **Channel_Used:** The medium or platform used for the campaign (e.g., Facebook, Email).
 - **Date:** Launch date of the campaign.
 - **Duration:** Duration of the campaign (e.g., "30 days").
 - **Performance Metrics:**
 - **Conversion_Rate:** Percentage of successful conversions.
 - **ROI:** Return on investment (percentage).
 - **Clicks:** Number of clicks received.
 - **Impressions:** Total number of impressions.
 - **Engagement_Score:** A score representing audience interaction.
 - **Financial Metrics:**
 - **Acquisition_Cost:** The cost of acquiring customers (in USD).
 - **Other Information:**
 - **Location:** The location where the campaign was run.
 - **Language:** Language used in the campaign.
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4. Task to be Performed

Task 01: Data Preparation

- **Import and Load:**
 - Upload the dataset into an SQL database using **LOAD DATA** or import tools.
 - **Clean and Preprocess:**
 - Remove duplicates and missing values.
 - Convert non-numeric fields (e.g., Duration, Acquisition Cost) into numeric formats.
 - Normalize financial metrics for consistent analysis.
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Task 02: Exploratory Data Analysis (EDA)

SQL Queries:

- Analyze campaign performance by campaign type and channel.
- Identify top-performing campaigns based on ROI and conversion rates.
- Examine trends across locations, target audiences, and campaign durations.

Insights:

- Generate summary tables to uncover trends and identify anomalies.
 - Detect any correlations between campaign type and ROI or conversion rates.
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Task 03: Interactive Dashboards in Power BI / Tableau

Page 1: Overview Dashboard

- **KPIs:**
 - Total Campaigns
 - Average ROI
 - Total Clicks and Impressions
- **Visualizations:**
 - **Bar Chart:** Top Companies by ROI
 - **Line Chart:** Monthly Spend vs. ROI Trends
 - **Pie Chart:** Distribution of Campaign Types

Page 2: Campaign Performance Dashboard

- **Scatter Plot:** Conversion Rate vs ROI (size = Engagement Score)
- **Heatmap:** Locations with the highest clicks
- **Matrix:** Campaign Type vs Channel Performance

Filters/Slicers:

- Add filters for Campaign Type, Location, Target Audience, and Date Range.
 - Enable drill-through to analyze individual campaign performance.
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Task 04: Data Analysis and Insights

Use SQL to answer key questions:

- Which campaign type had the highest ROI?
- What is the average conversion rate for social media campaigns compared to email campaigns?

- Which target audience group drove the most clicks?
- Analyze trends based on monthly or quarterly performance.

Insights Example:

- Campaigns with higher engagement scores often show higher ROI.
- Social media campaigns tend to have lower acquisition costs compared to email campaigns.




Task 06: Recommendations

Actionable Insights:




- Focus on specific channels that show higher engagement(e.g., Social Media or Email).
- Adjust budgets for campaigns with low ROI and conversion rates.
- Suggest optimization strategies for underperforming campaigns, such as refining target audiences or adjusting campaign timing.

5. Final Report & Submission Guidelines

Deliverables:

-  SQL outputs are saved as .csv or .xlsx files.
-  Interactive Power BI dashboards for stakeholders.
-  A final report documenting the analysis, findings, and recommendations.

Submission Checklist:

-  SQL Scripts: Queries for data processing & analysis.
-  Power BI Dashboard: Fully functional with visualizations.
-  Report Structure:
 - Introduction & Objective
 - EDA & SQL Queries
 - Key Findings & Trends
 - Visual Analysis Screenshots
 - Conclusion & Business Insights

Evaluation Criteria:

- Data Cleaning & SQL Queries (25%)
- EDA & SQL Insights (25%)
- Power BI Dashboards (25%)
- Report Quality & Interpretation (25%)

Submission Details:

- Report: Submit in PDF format.
- Dashboard: Share .pbix (Power BI) file.
- SQL Code: Submit a clean and documented SQL file.
- GitHub: Provide a link to your GitHub repository with organized project files.
- All files and links must be sent via email to projects@emergingindiagroup.com

