

## Objective

Assess the effectiveness of various marketing campaigns to refine future marketing strategies and allocate budgets effectively.

## Requirements

### 1. Campaign Metrics Calculation

- **Conversion Rate**
- **Cost per Click (CPC)**
- **Cost per Conversion (CPA)**
- **Return on Ad Spend (ROAS)**

### 2. Channel Comparison

- Analyze campaign performance across different channels using metrics like CTR, conversion rate, CPC, and ROAS.
- Highlight the top-performing channels based on conversion rates and ROAS.
- Identify channels with high costs but low ROAS for potential budget adjustments.

### 3. Demographic Analysis

- Segment campaign performance by demographics (age, gender, location) to pinpoint high- and low-performing segments.
- Determine which demographic groups respond most effectively to specific channels or types of campaigns.
- Provide recommendations for future targeting based on demographic insights.

### 4. Time-Based Analysis

- Monitor campaign performance over time (weekly or monthly) to identify trends or seasonal peaks.
- Analyze whether certain times of the year result in higher conversions or better ROAS.

### 5. Dashboard Requirements

- **KPIs Summary:** Include total impressions, total clicks, total conversions, total spend, total revenue, average CTR, and ROAS.
- **Campaign Performance Overview:** Use bar or line charts to compare key metrics (CTR, conversion rate, ROAS) across campaigns.
- **Channel Performance Breakdown:** Create visualizations (e.g., pie or stacked bar charts) to illustrate the distribution of total spend, impressions, and conversions by channel.
- **Demographic Insights:** Present charts showing the breakdown of conversions and revenue by age, gender, and location.
- **Trend Analysis:** Use line or area charts to display campaign metrics over time (impressions, clicks, conversions).

## Expected Insights

- **Top-Performing Campaigns and Channels:** Identify which campaigns and channels yield the most conversions and revenue relative to the budget.

- **Demographic Insights:** Determine which customer demographics are most engaged with the campaigns.
- **Seasonal or Temporal Trends:** Uncover patterns in campaign success associated with specific times of the year.

**Budget Allocation Recommendations:** Recommend reallocating budgets to high-performing channels and campaigns with strong ROAS while reducing spend on underperforming areas.

There is the database [link](#)