**Objective**Assess the effectiveness of various marketing campaigns to refine future marketing strategies and budget allocations.

**Requirements**

1. **Campaign Metrics Calculation**
	* **Conversion Rate**
	* **Cost per Click (CPC)**
	* **Cost per Conversion (CPA)**
	* **Return on Ad Spend (ROAS)**
2. **Channel Comparison**
	* Compare campaign performance across different channels based on CTR, conversion rate, CPC, and ROAS.
	* Highlight the channels that perform best based on conversion rate and ROAS.
	* Identify channels with high costs and low ROAS for budget review and adjustment.
3. **Demographic Analysis**
	* Segment campaign performance by demographics, including age, gender, and location, to pinpoint high- and low-performing segments.
	* Analyze which demographic groups are most responsive 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.
	* Examine whether certain times of the year lead to higher conversions or improved ROAS.
5. **Dashboard Requirements**
	* **KPIs Summary:** Include total impressions, total clicks, total conversions, total spend, total revenue, average CTR, and ROAS.
	* **Campaign Performance Overview:** Create bar or line charts that compare key metrics (CTR, conversion rate, ROAS) across campaigns.
	* **Channel Performance Breakdown:** Visualize the distribution of total spend, impressions, and conversions by channel using pie or stacked bar charts.
	* **Demographics Insights:** Use charts to show the breakdown of conversions and revenue by age, gender, and location.
	* **Trend Analysis:** Create a line or area chart to illustrate campaign metrics over time (impressions, clicks, conversions).

**Expected Insights**

* **Top-Performing Campaigns and Channels:** Identify which campaigns and channels yield the highest conversions and revenue relative to the budget.
* **Demographic Insights:** Determine which customer demographics are most responsive to the campaigns.
* **Seasonal or Temporal Trends:** Identify patterns in campaign success related to specific times of the year.
* **Budget Allocation Recommendations:** Suggest reallocations to high-performing channels and campaigns with a high ROAS while reducing spend on underperforming segments.