The Marketing Campaign Performance Dataset provides valuable insights into the effectiveness of various marketing campaigns. This dataset captures the performance metrics, target audience, duration, channels used, and other essential factors that contribute to the success of marketing initiatives. With 200000 unique rows of data spanning two years, this dataset offers a comprehensive view of campaign performance across diverse companies and customer segments.

The dataset contains 200,000 entries and 16 columns related to marketing campaigns. Key fields include:

* **Campaign\_ID**: Unique identifier for each marketing campaign.
* **Company**: The company running the campaign.
* **Campaign\_Type**: The type of campaign (Email, Display, Influencer, etc.).
* **Target\_Audience**: The specific audience segment targeted by the campaign, such as women aged 25-34, men aged 18-24, or all age groups.
* **Duration**: Length of the campaign.
* **Channel\_Used**: The channels utilized to promote the campaign, which may include email, social media platforms, YouTube, websites, or Google Ads
* **Conversion\_Rate**: The percentage of leads or impressions that converted into desired actions, indicating campaign effectiveness..
* **Acquisition\_Cost**: Total cost to acquire customers during the campaign.
* **ROI**: Return on investment for the campaign.
* **Location**: The geographical location where the campaign was conducted, encompassing major cities like New York, Los Angeles, Chicago, Houston, or Miami.
* **Language**: The language used in the campaign communication, including English, Spanish, French, German, or Mandarin.
* **Clicks**: Number of clicks generated.
* **Impressions**: Number of times the ad was shown.
* **Engagement\_Score**: Engagement level of the audience (e.g., likes, comments).
* **Customer\_Segment**: The specific group targeted (e.g., Health & Wellness).
* **Date**: Date when the campaign was launched.

To proceed further, I will Create additional KPIs like Customer Lifetime Value, CTR, Lead score , Website Visitors , Cost per Action/Acquisition , Cost per lead from the given dataset in separate columns. After creating these columns or metrics, Create a list of questions and provide actionable insights and recommendations

* Calculate ARPU (approximate average revenue per user)
* # ARPU = (Acquisition\_Cost \* ROI) / Clicks
* Estimate customer lifetime based on campaign duration# Assuming each day of campaign duration is roughly equivalent to 0.1 of customer lifetime
* Customer lifetime = Duration days\*0.1
* Estimate gross margin (assuming 70% margin based on standard practice unless specified)
* CLTV = ARPU \* Customer Lifetime \* 0.7
* Calculate Lead Score based on engagement metrics and conversion rate
* # Lead Score = (0.4 \* Engagement\_Score) + (0.3 \* Conversion\_Rate) + (0.2 \* Clicks) + (0.1 \* Impressions)
* CTR = Clicks\*100/Impressions
* Website visitors = 0.6\*Impressions
* Cost per Action = Acquisition Cost/Clicks
* Cost per Lead = Acquisition Cost/(Clicks \* Conversion rate)

### Key Insights:

1. **Campaign Performance Metrics**:
   * Average **conversion rate**: 8%, with a range from 1% to 15%.
   * Average **acquisition cost**: $12,504, with costs ranging from $5,000 to $20,000.
   * Average **ROI**: 5, with values ranging from 2 to 8.
   * Average **clicks** per campaign: ~550, with a maximum of 1,000.
   * Average **impressions**: 5,507, with a maximum of 10,000.
2. **Unique records across several dimensions.**

* There are 5 campaign types out of which Influencer has highest record count followed by Search , Display, Email and Social Media.
* There are 6 channels out of which Email has highest no of campaigns followed by Google Ads followed by Instagram, YouTube, Website and Facebook
* There are 5 unique company types with Tech Corp having highest no of campaigns followed by Alpha Innovations.
* There are 5 different customer segments with foodies having highest no of campaigns and fashionistas with lowest no of campaigns.
* More than 50% of campaigns were run for 30 days and 45 days duration.
* Language used in the campaign were mostly Mandarin followed by Spanish, German, English and French.
* The location where the campaign was conducted was mainly Miami, New York, followed by Chicago, Los Angeles and Houston.
* The specific target audience group for which the campaign was conducted were Men 18-24 followed by Men 25-34, All ages and Women 25-44.

I'll now address key questions like:

* 1. What channels have the highest/lowest ROI?

**Insights : Facebook** performs best in terms of ROI (5.02), closely followed by **Website** (5.01) and **Google Ads** (5.00). **Facebook** has slightly lower acquisition costs than other channels, which may contribute to its higher ROI.**Instagram** and **YouTube** have the lowest ROI (~4.99), but are still comparable in terms of conversion rates (~8%).

**Recommendations : Facebook and Website** should be prioritized for future campaigns, given their higher ROI. Increase ad spend on **Facebook** and **Website**, as they provide higher returns relative to the cost.

* 1. What channels perform best in terms of conversion rate?

**Insights : Email** has the highest conversion rate (8.02) followed by **Google Ads**(8.01) and **Website** (8.01).**YouTube** and **Instagram** has least conversion rate (7.98)

**Recommendations :** Focus more on **Google Ads** and **Email** campaigns to drive conversions, as they consistently yield strong results

* 1. Which campaign type yield highest conversion rate?

**Insights : Influencer**(8.03) has highest conversion rate followed by **Social** **Media**(8.01) and **Display, search** and **Email**.

**Recommendations :** Encouraging or spending on Influencers and Social media campaign can yield higher profits

* 1. Which campaign type perform best in terms of ROI ?

**Insights : Influencer** (5.01) performs best in terms of ROI followed by **Search, Display,** **Email** and **Social Media**

**Recommendations :** Spending more on Search, Display can yield higher ROI

* + 1. Which customer segments yield the highest engagement?

**Insights : Foodies** have the highest engagement score (5.51) and ROI (5.00), indicating strong audience interaction. Outdoor Adventurers displays high engagement score (5.50) followed by Fashionistas. Health and Wellness has least engagement score of 5.48.

**Recommendations :** Design more interactive and engaging campaigns for **Foodies** to leverage their high level of engagement.

* 1. **Which company performs best in terms of ROI, CTR, Conversion Rates, Lead Score, Website visitors and CLTV?**

**Insights : TechCorp has highest ROI (5.01) followed by Alpha Innovations. NextGen Systems has least average ROI of 4.99. TechCorp and Alpha Innovations has higher Conversion Rate and Acquisition Cost as well indicating higher investment leads to higher returns. NextGen Systems is lowest across ROI, Conversion rate, Total Acquisition Cost,CLTV, CTR. Alpha Innovations has highest CLTV. Tech Corp has highest CTR of 14.09%. NextGen Systems has highest Lead Score and website visitors followed by Alpha Innovations.**

**Recommendations :** Companies like **NexGen Systems** may need to revise their campaign strategies to improve its marketing efficiency.

Analyze TechCorp's strategies, such as channel usage and audience targeting, and replicate these tactics for other companies with lower ROI.

* 1. Which channels has higher Acquisition Costs ?

**Insights** : Google Ads, Email, Facebook has higher Acquisition costs compared to other channels.

**Recommendations** : Continuously monitor and manage **acquisition costs** across channels, especially for platforms like **Email** and **Google Ads**, where costs are slightly higher.

* 1. How does campaign duration affect conversion rates?

**Insights** : Shorter campaign duration of 15days or 30 days yield higher conversion rates.

**Recommendations** : Test shorter, high-intensity campaigns to see if they generate better conversion rates and improve ROI

* 1. Which target audience group has the best ROI?

**Insights** : The dataset suggests that campaigns targeting **Men 25-34** and **Women 35-44** are performing well in terms of ROI

**Recommendations** : Increase ad spends on these demographics to maximize return.

* 1. How does the acquisition cost impact ROI?

**Insights** : Higher the Acquisition Costs , higher is the ROI for all channels except

Email as the scatterplot shows the linear trend between ROI and Acquisition Cost.

**Recommendations** : Develop Marketing strategies like retaining customers as

Email has highest conversion rate among all channels.

* 1. Which language or region performs best in campaigns?

**Insights** : Certain languages like French, Mandarin performs best in ROI and

Conversion Rate while Miami in terms of ROI and New York in conv. Rate

**Recommendation**: Tailor campaigns to specific languages and regions that show better performance metrics. For example, leverage localized content or region-specific marketing tactics to maximize engagement and conversion rates.

* 1. Which campaign type performs best in terms of CTR and Engagement Score?

**Insights** : Display and Social Media has higher CTR and Engagement Score.

**Recommendations** : Follow similar strategies for Email and other campaign types to improve its CTR and Engagement Scores.

**These insights can help refine marketing strategies, optimize budget allocation, and maximize overall campaign performance**

**General Business Recommendations:**

1. **Channel Investment**: Allocate more budget to channels that consistently deliver higher ROI (Facebook, Google Ads).
2. **Segmentation Focus**: Prioritize campaigns targeting high-performing segments like **Foodies** and **Tech Enthusiasts**.
3. **Cost Efficiency**: Continuously monitor acquisition costs to ensure campaigns remain efficient and profitable.
4. **Engagement Strategies**: Focus on boosting engagement scores with high-quality, interactive content to drive conversions.

**These insights can help refine marketing strategies, optimize budget allocation, and maximize overall campaign performance**