Ad Campaign Performance Analysis

0411 DV Team 2

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Introduction

Goal: To goal is to analyze data from the marketing team on several ad campaigns, and choosing at least one ad campaign to discontinue after the analysis.

Tool used: Excel

Techniques applied: Pivot tables and charts

In order to analyze the data, we constructed pivot table and various charts and graphs, so that we can reach to a conclusion on which ad campaign should be discontinued. A pivot table allows you to extract the significance from a large, detailed dataset.

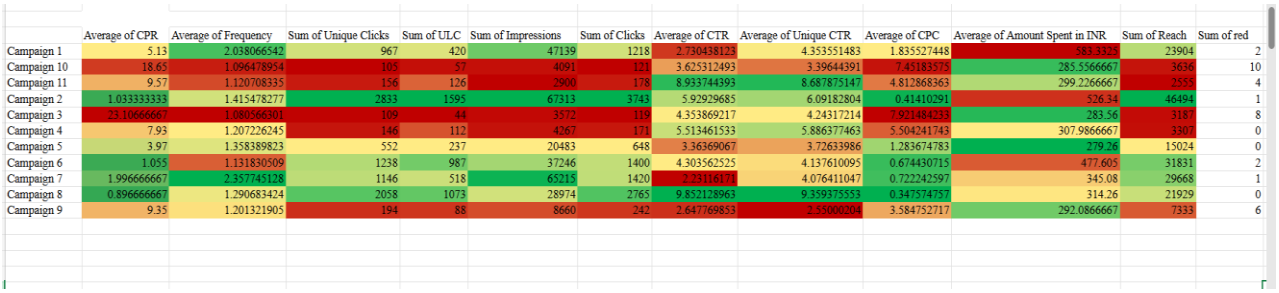
DATA ANALYSIS

The dataset provided to us is for Analysis is a Marketing team Data. This dataset provides detailed performance metrics for various ad campaigns. Here's a description of each column:

- **campaign ID**: Unique identifier for each campaign.
- **Campaign Name**: The name or identifier for each specific campaign.
- **Audience**: The target audience group (e.g., "Educators and Principals," "Students").
- **Age**: Age range of the target audience.
- **Geography**: Geographic regions where the campaign is being targeted.
- **Reach**: The number of unique users who saw the ad.
- **Impressions**: The total number of times the ad was displayed.
- **Frequency**: Average number of times each user saw the ad (Impressions divided by Reach).
- **Clicks**: Total number of clicks received on the ad.
- **Unique Clicks**: Number of unique users who clicked on the ad.
- **Unique Link Clicks (ULC)**: Number of unique users who clicked on a specific link within the ad.
- **Click-Through Rate (CTR)**: The percentage of impressions that resulted in clicks**.**
- **Unique Click-Through Rate (Unique CTR)**: The percentage of unique impressions that resulted in unique clicks.
- **Amount Spent in INR**: The amount spent on the campaign, shown in INR.
- **Cost Per Click (CPC)**: The average cost for each click on the ad.
- **Cost per Result (CPR)**: The average cost per desired outcome or result of the campaign.

Therefore, this dataset can help in analysing the cost-effectiveness, reach, and engagement of each ad campaign, allowing insights into which campaigns are performing well and which might need optimization or discontinuation.

Through the dataset we created a Pivot Table with the help of Excel. Below is the pivot table:



	Average of CPR	Average of Frequency	Sum of Unique Clicks	Sum of ULC	Sum of Impressions	Sum of Clicks	Average of CTR	Average of Unique CTR	Average of CPC	Average of Amount Spent in INR	Sum of Reach	Sum of red
Campaign 1	5.13	2.038066542	967	420	47139	1218	2.730438123	4.353551483	1.835527448	583.3325	23904	2
Campaign 10	18.65	1.096478954	105	57	4091	121	3.625312493	3.39644391	7.45183575	285.5566667	3636	10
Campaign 11	9.57	1.120708335	156	126	2900	178	8.933744393	8.687875147	4.812868363	299.2266667	2555	4
Campaign 2	1.033333333	1.415478277	2833	1595	67313	3743	5.92929685	6.09182804	0.41410291	526.34	46494	1
Campaign 3	23.10666667	1.080566301	109	44	3572	119	4.353869217	4.24317214	7.921484233	283.56	3187	8
Campaign 4	7.93	1.207226245	146	112	4267	171	5.513461533	5.886377463	5.504241743	307.9866667	3307	0
Campaign 5	3.97	1.358389823	552	237	20483	648	3.36369067	3.72633986	1.283674783	279.26	15024	0
Campaign 6	1.055	1.131830509	1238	987	37246	1400	4.303562525	4.137610095	0.674430715	477.605	31831	2
Campaign 7	1.996666667	2.357745128	1146	518	65215	1420	2.23116171	4.076411047	0.722242597	345.08	29668	1
Campaign 8	0.896666667	1.290683424	2058	1073	28974	2765	9.852128963	9.359375553	0.347574757	314.26	21929	0
Campaign 9	9.35	1.201321905	194	88	8660	242	2.647769853	2.55000204	3.584752717	292.0866667	7333	6

Link: https://1drv.ms/x/c/fd26e61b6609f2c3/EUjPCZKMLW5Orwjh4UVj_KIBLIy1BCqI-qwI6P6oEE4qSA

Here's an overview of each key metric from the pivot table, which shows how the campaigns are performing across various dimensions. This should help in understanding where each campaign stands in terms of cost-effectiveness, reach, engagement, and other factors.

Metrics Overview:

1. **Average of CPR (Cost per Result)**:
    - **High CPR**: Campaigns 3 (23.11) and 10 (18.65) have the highest CPR, indicating they are the most expensive campaigns per achieved result, which could imply poor cost efficiency.
    - **Low CPR**: Campaigns 6 (1.05) and 8 (0.90) have the lowest CPR values, meaning they are the most cost-effective at achieving results.
2. **Average of Frequency**:
    - **High Frequency**: Campaign 7 has the highest frequency (2.36), suggesting users are exposed to this ad more frequently, which could increase engagement or potentially lead to ad fatigue.
    - **Moderate to Low Frequency**: Most other campaigns have frequencies around 1–2, which is within an acceptable range.
3. **Sum of Unique Clicks**:
    - **High Unique Clicks**: Campaign 2 has the highest unique clicks (2833), followed by Campaign 6 (1238) and Campaign 8 (2058), showing strong engagement from unique users.
    - **Low Unique Clicks**: Campaigns 10 (105) and 11 (156) have low unique clicks, suggesting weak engagement.
4. **Sum of ULC (Unique Link Clicks)**:

- **High ULC**: Campaigns 2 (1595) and 7 (1146) have the highest ULC, indicating effective link engagement.
- **Low ULC**: Campaign 10 (57) and Campaign 11 (126) have low ULC, signalling low interaction with link elements in the ad.

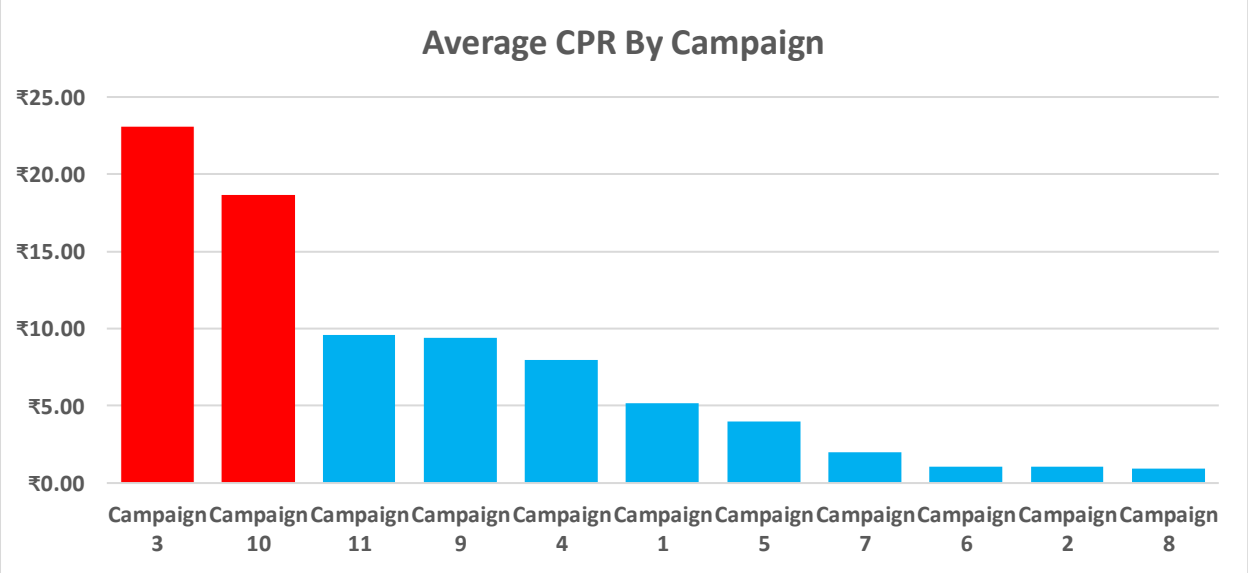
5. **Sum of Impressions**:
    - **High Impressions**: Campaigns 2 (67,313) and 7 (65,215) have the highest impressions, showing they reached the most users.
    - **Low Impressions**: Campaigns 10 (4091) and 11 (2900) have low impressions, indicating limited visibility.
6. **Sum of Clicks**:
    - **High Clicks**: Campaign 2 (3743) and Campaign 7 (1420) have the highest click counts, demonstrating strong user engagement.
    - **Low Clicks**: Campaigns 3 (119) and 10 (121) have low click counts, indicating limited engagement.
7. **Average of CTR (Click-Through Rate)**:
    - **High CTR**: Campaign 11 has a high CTR (8.93%), suggesting it's good at converting impressions into clicks.
    - **Low CTR**: Campaigns 9 (2.64%) and 10 (3.62%) have low CTRs, showing limited engagement relative to impressions.
8. **Average of Unique CTR**:
    - **High Unique CTR**: Campaign 8 has the highest unique CTR (9.35%), showing high engagement from unique users.
    - **Low Unique CTR**: Campaigns 10 (3.39%) and 3 (4.24%) have low unique CTR, indicating lower unique user engagement.
9. **Average of CPC (Cost per Click)**:
    - **Low CPC**: Campaign 6 (0.67) and Campaign 8 (0.72) have the lowest CPC, meaning they're the most cost-effective in generating clicks.
    - **High CPC**: Campaigns 10 (7.45) and 3 (7.92) have high CPCs, making them costly per click.
10. **Average of Amount Spent in INR**:
    - **High Spending**: Campaign 6 (477.60 INR) and Campaign 7 (345.08 INR) have the highest spending but also show good cost-efficiency and engagement.
    - **Moderate Spending**: Campaign 1 and Campaign 4 also show high amounts spent (around 300 INR) with reasonable engagement metrics.

- **Low Spending**: Campaigns with low amounts spent, like Campaign 5 (279.26 INR), show varying effectiveness in engagement.

11. **Sum of Reach**:
    - **High Reach**: Campaigns 6 (31,831) and 2 (46,494) have the highest reach, meaning they successfully reached a large audience.
    - **Low Reach**: Campaigns 10 (3636) and 11 (2555) have low reach, indicating they were seen by fewer users.
12. **Sum of Red (Performance Issues)**:
    - This column tracks poor performance indicators, where a higher count means redder (poor) values across metrics.
    - **High "Sum of Red"**: Campaigns 10 (10), 3 (8), and 9 (6) indicate multiple areas of poor performance.
    - **Low "Sum of Red"**: Campaigns 2, 4, and 8 have fewer or no red values, showing strong performance across most metrics.

VISUALIZATIONS

We also constructed various charts in order to analyse the data:

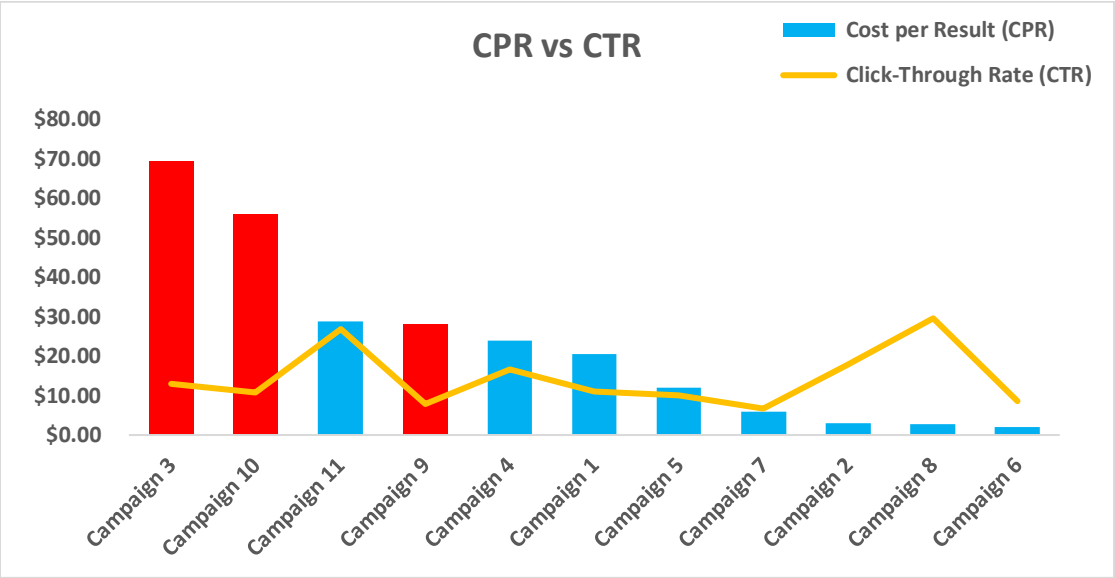


In this analysis, we created a chart to visualize the relationship between **Campaign IDs** and their corresponding **Average Cost Per Result (CPR)**. The primary objective was to identify campaigns with low CPR, which indicates higher cost-efficiency.

Key findings:

- Campaigns with **low CPR** were highlighted to pinpoint the most cost-effective campaigns.

- These campaigns demonstrate better performance in terms of generating results at a lower cost, which is crucial for optimizing ad spend.

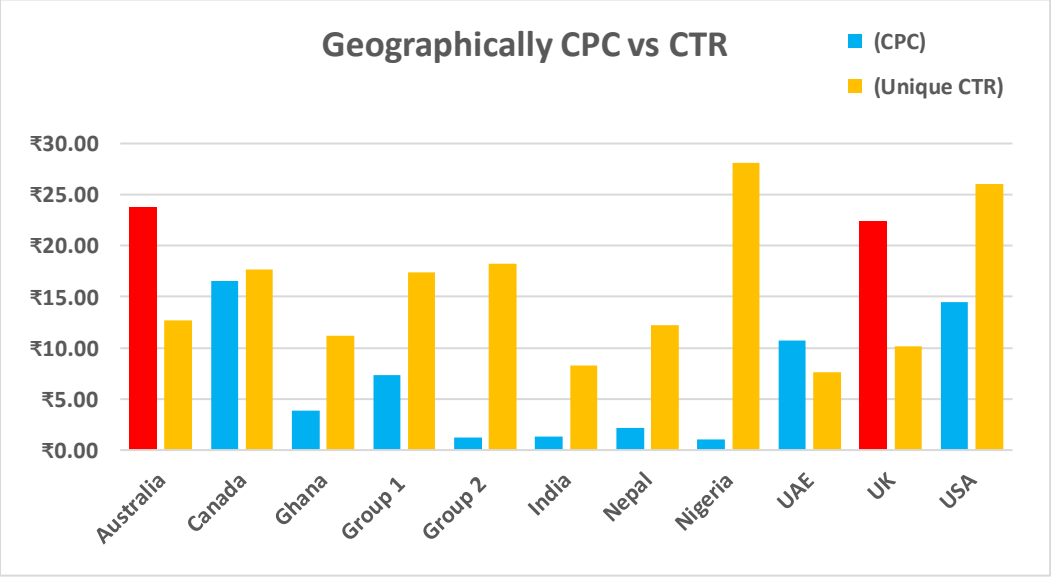


As observed in the analysis, **Campaigns 3, 10, and 9** exhibit a **high Cost Per Result (CPR)** and a **low Click-Through Rate (CTR)**. This indicates that these campaigns are not running effectively, as they are costing more while generating fewer clicks.

Key insights:

- High CPR means these campaigns are less cost-efficient.
- Low CTR suggests that the audience is not engaging well with the ads.

Based on these findings, it is recommended to either **optimize** these campaigns by revising their targeting, creatives, or budgets, or consider **discontinuing** them if improvements are not feasible.



In this analysis, we compared **Geographically Unique CTR** and **CPC** to evaluate ad performance across different regions. The goal was to identify which ads were underperforming in specific locations.

Key findings:

- **Campaigns 3 and 10** showed **high Unique CTR** but were marked in **red** due to their high **CPC**, indicating inefficiency in terms of cost.
- These campaigns are primarily targeting **Australia** and **UK**, where despite good engagement, the cost per click remains significantly high.

This suggests that while these campaigns are attracting clicks, the cost associated with each click is not justified, making them less effective. Further optimization or budget adjustments may be needed to improve their performance.

KEY FINDINGS:

These insights can guide decisions on which campaigns to continue, optimize, or discontinue based on cost-effectiveness and engagement outcomes.

- Top Performers: Campaigns 2, 6, and 8 show strong engagement, high reach, low CPR, and low CPC, indicating they are cost-effective and engaging.
- Underperformers: Campaigns 3 and 10 show high CPR, low engagement, and high "Sum of Red" values, suggesting they are expensive and ineffective, making them candidates for discontinuation or revision.
- Campaign 11: Despite low reach, it has a high CTR, which indicates some engagement success; however, other metrics suggest it could benefit from optimization.

CONCLUSION:

After analysing the pivot table data and the charts, here's a conclusive summary on which campaigns to prioritize, optimize, or discontinue based on their performance:

1. Recommended for Continuation:
    - Campaigns 2, 6, and 8 are the strongest performers across multiple metrics. They have:
        - High reach and impressions, indicating a large audience reach.
        - Low CPR and CPC, making them cost-effective in generating results and clicks.
        - High engagement metrics (clicks, unique clicks, and CTR), showing these campaigns resonate well with users.
    - Action: These campaigns should be continued, with potential for slight optimization to maintain their effectiveness.
2. **Recommended for Optimization**:

- Campaign 7: While showing good reach and engagement, its frequency is relatively high (2.36), which could lead to ad fatigue. Slight adjustments in targeting or frequency could help sustain its performance.
- Campaign 11: It has a high CTR, suggesting it attracts clicks relative to its impressions. However, it suffers from low reach and impressions, which limits its overall effectiveness. Adjusting its targeting or increasing the budget slightly may improve reach and engagement.

3. **Recommended for Discontinuation:**
    - **Campaigns 3 and 10** are the weakest performers. They have:
        - High CPR and CPC, making them expensive without delivering proportional results.
        - Low reach, impressions, and engagement metrics (clicks, unique clicks, and CTR), indicating they are not resonating well with the audience.
        - High "Sum of Red" values, showing multiple areas of poor performance across metrics.
    - Action: Discontinuing these campaigns is recommended, as they are not cost-effective and are unlikely to yield a positive return without substantial changes.
4. **Neutral Campaigns**:
    - Campaigns 1, 4, and 9 show moderate performance across most metrics. While they are not as cost-effective as the top-performing campaigns, they are not as underperforming as campaigns 3 and 10.
    - Action: These campaigns could be monitored for minor optimizations, or reallocated if the budget is limited and higher-performing campaigns need additional funding.