Data Analysis on Advertisement Campaign

**Domain Understanding:**

Every one of us experiencing lot of pop-up advertisements while we surfing in different pages/apps like Facebook, Youtube etc., Companies are using this as one strategy to promote their business and to popularize their brand name to the people. For this they are paying to the app or social networking companies to display (pop-up) the brand in their pages.

Now the ultimate question is how many of us really clicking on this advertisements and seeing the stuffs inside it ?. As I am paying money, I want to know whether advertising in one medium really creating an impact towards promoting my brand.

In digital marketing domain, understanding the performance of advertisement campaigns helps brands optimize their marketing budgets. One of the key metric that is tracked by marketeers is the number of times users clicked on an advertisement. A sudden spike or drop in the clicks per day indicates a potential anomaly with the advertisement and would require manual intervention to investigate the reason behind the spike/drop in click counts.

**Dataset Codebook:**

The Dataset is having 3 features (columns) and 4049 observations (rows).

|  |  |
| --- | --- |
| Campaign ID | This is the id of the campaign. This indicates a marketing campaign run by a brand. |
| Date | Date of which the count was recorded |
| Click count | Number of clicks recorded for the campaign on a given day |

**Problem Statement:**

Use the data from the data set to analyze the click counts per day of the individual advertisement campaigns over a different period of time and identify/evaluate campaigns success on different base/perspective.

**Expected Outcome:**

The main outcome is to understand the behavior of each advertising campaigns so that both the side of management can be use these findings to promote the business:

1. Suggest the best and worst month for advertising campaign based on cumulative clicks
2. Create a pivot structure between a campaign and month/Quarter to get to know which campaign is doing good in each month/Quarter.
3. Understand the reduction in the number of campaign from 2018 to 2019
4. Understand the quantity of new advertisement campaigns happening in 2019 (Which not happened in 2018)
5. List the advertisement campaigns which are happened in 2018 but opted out in 2010
6. How many advertisement campaigns are happening in both 2018 and 2019
7. As a company manager to increase the revenue, I want to give some discount to some advertisement campaign, but giving the discount to all the advertisement campaign may not be the good strategy. Suggest me few advertisement campaigns for which I can give some discount and state the reason for your picks.
8. Graphical approach always good to convey your findings. Some up with the basic graphs to show case the above findings.
9. List the things that you are suspecting as Anomalies.

**Approach:**

Apply the concepts of first principle of python, pandas, numpy and visualization packages like matplotlib/searborn to work out on the above tasks. Participants should fee free and can come out with other business strategy which is not listed the previous section.