Digital Marketing Analyst Project

After understanding all the necessary vocabulary of a marketing company, here we will start by the data cleaning, manipulation and hypothesis testing in order to help the company "Radiant Glow" to take decision if their ads are efficient and bring them money or they need to fix them.

Part 2 – Data Cleaning and Testing:

- **Step 1**: **Merge Data**: First our data was divided into two sheets so we have merged them using Outer Join based on column "date" and column "campaign"

- **Step 2**: **Check the Merged data** set by Removing Duplicates

- **Step 3**: **Demonstrate the validity of the joined dataset** by checking the existence of missing values in Rows and Columns then by checking the uniqueness of values in Rows and Columns.

- **Step 4: Dealing with TAXONOMY**: split the Campaign column into 6 new columns: Market, Channel, Platform, Destination, Objective and Product Type.

- **Step 5: Find the Metrics measures** to start testing the hypothesis: Click through rate (CTR), Conversion Rate, Cost per Mile (CPM), Cost per Install (CPI) and Average Sign-Ups.

- **Step 6:** Test the following hypothesis:
  - ➔ **Hypothesis 1**: **"Channel Effectiveness"**: we have a column for channels where it contains 2 types "Search" and "Social Media" each channel contains a specific platform so here we will check which type of channel is more effective in driving conversion?

  Hypothesis A: Social Media Channels (Snapchat, Tiktok, Twitter) are more effective in driving conversion than Search channels (Apple App Store, Apple Search, Facebook, Google Ads)
  Hypothesis B: Search Channels are more effective in drinving conversion than Social Media channels.

  - ➔ **Hypothesis 2**: **"Platform Engagement":** we have a column for platform that contains 7 different platforms "Apple APP Store, Apple Search, Facebook, Google Ads, Snapchat, TikTok and twitter" so we need to see which one has the highest metric measures in order to run a campaign using the best platform.

  Hypothesis A: Campaigns run on Apple App Store result in higher metric measures than campaigns run on all the other platforms (Apple Search, Facebook, Google Ads, Snapchat, Tiktok and Twitter)
  Hypothesis B: Campaigns run on Apple Search, Facebook, Google Ads, Snapchat, Tiktok and Twitter result in higher metric measures than campaigns run on Apple App Store

- ➔ **Hypothesis 3**: **"Market Performance"**: we have a column for Market that contains 4 different markets "Egypt, KSA, Kuwait and UAE" so we need to see which one generate higher conversion rates

Hypothesis A: Campaigns targeted at UAE market generate higher converion and metric measure rates than campaigns targeted at the other markets (Egypt, KSA and Kuwait)
Hypothesis B: Campaigns targeted at Egypt, KSA and Kuwait markets generate higher converion and metric measure rates than campaigns targeted at UAE

- ➔ **Hypothesis 4**: **"Product Type Impact"**: we have a column for product that contains 3 different products "Hair Care, Personal care and skin care" so we need to know which one has the highest engagement rate.

Hypothesis A: Skin care product campaigns have higher engagement rates than Hair care and Personal Care.
Hypothesis B: Hair care and Personal care products have higher engagement rates than Skine Care

In a nutshell, we will discuss the results in a power point presentation containing Histograms and bar plot for each metric measure to simplify and identify in each case which hypothesis is accepted and which one is rejected.