**Assignment Details and Instructions**

**Background**

OJCommerce is a leading e-commerce firm selling products over a million products from thousands of brands across many categories - Home, Kitchen, Garden, Tools, Office equipment, Pets, Food & Household Supplies. We sell across multiple online marketplaces like Amazon, Walmart, eBay, Wayfair among others. We also have a direct sales channel through our website and to exacerbate sales we rely on Google Ads to promote the various products on sale.

We have used a sample dataset based on our Google Ads campaign performance data to construct this testing exercise. The candidate is encouraged to build greater familiarity with Google Ads using the myriad information available online. Sample links are mentioned below

Introduction to Google Ads <https://www.youtube.com/playlist?list=PL9piTIvKJnJNvhf_KbIN1q22JH9VESLN8>

Understanding Google Ads Reports

<https://www.youtube.com/watch?v=mBpSZxsQynQ>

Details about the metrics (only a small subset is used in the dataset) reported in the data set can be inferred from the following link

<https://www.powermyanalytics.com/connectors/google-ads/fields/>

**Dataset notes**

* Google Ad Performance data is provided in the **AdPerformance Metrics** dataset
* Details of the Items and their categorizations at different levels are presented in the **ProductDetails** dataset
* Campaign level information is presented in **CampaignDetails** dataset

**Exercise Instructions**

The candidate is required to explore the data set and present their analyses covering the following

1. Present an exploratory analysis to help stakeholders understand the dataset – this should cover summary information to understand no and types of products covered across category levels, total cost incurred on ad spend and overall return.
2. How does the Return on Ad Spend ( RoAS = Conv.Value / Cost ) compare across the months for which data is presented ? Present the analyses at the following levels
   1. Campaign
   2. Product Category ( Level 3 )
   3. Item / Product
3. Identify the Top and Bottom 10 Product Categories (Level 5) in terms of ad performance. Are there any reasons you can attribute to their top or bottom performance based on the dataset ?
4. Is Click Type a significant factor that drives RoAS performance? Explain why ?
5. Based on your research about Google Ads, please suggest other metrics that may be useful to evaluate campaign performance. Also please attempt to incorporate your suggested metrics into your analyses and present to us what you can conclude from them.