**FINAL EXAM**

**Overview**

You are the founder of *ABC Consulting*, which offers digital marketing and analytics services to several Fortune 500 companies and start-up firms. Google is considering hiring your company to advise clients on *Google Analytics 4* best practices so they may improve online outcomes. To determine your knowledge about *Google Analytics 4*, digital data collection and business acumen, they are asking you to provide insights and guidance on three projects.

1. **Project Rubin** - For the weeks starting May 21, May 28, and June 4 of 2023*, Google Merchandise Store* revenue is zero. What are the likely causes of this outcome?
2. **Project Hampel -** For the week starting September 24 they noticed a sharp increase in *Google Merchandise Store* revenue. What is driving this increase?
3. **Project Box-** For the last 2 weeks of December 2023 and first 4 weeks of January 2024 *Google Merchandise Store* revenue is well below average weekly revenue. What are the likely causes of this outcome? What are your recommendations on improving revenue during this time of year?

A graph showing a line

Description automatically generated with medium confidence

Weeks Starting May 21, May 27, and June 4

Week Starting September 24

Last Two Weeks of December and First Four Weeks of January Starting September 24

Figure 1: Google Merchandise Store Weekly Total Revenue - Most Recent 12 Months

You are working with the *Google Merchandise Store* Director of Marketing, and she has requested the output of your findings to be presented at the next executive meeting.

For this assignment you will be presenting your findings to the *Google Merchandise Store* Marketing Team. Google associates are influenced strongly by data. Thus it is advisable that you include charts, trends, and visualizations in an easy-to-understand yet data rich way to justify your answers and recommendations.

**Instructions**

For your final exam, create and present a slide presentation covering each of the topics below, ordering slides by section. Further detail on elements of each section is available under **Section Details** below. Point distribution is defined below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Presentation Section** | **Topic** | **% of Grade** |  |
|  | Overall Clarity, Organization, and Flow of Presentation. Quality of Visuals and Storytelling | 20% |  |
| **Section 1** | **Project Rubin** – Goals, Key Challenges & Findings | 10% |  |
| **Section 2** | **Project Hampel** – Goals, Key Challenges & Findings | 20% |  |
| **Section 3** | **Project Box** – Goals, Key Challenges, Findings & Recommendations | 25% |  |
| **Section 4** | **Advertising Recommendations** | 25% |  |

To receive credit for your insights, you must document your work in two ways:

1. In your presentation include tables and visualizations that justify your findings.
2. Cite all sources of your tables and visualizations (e.g., Reports > Monetization > Overview [Last 12 Months])

Screenshots of charts can be taken from *Google Analytics 4*.

**Section Details**

**Section 1**: **Project Rubin** – Goals, Key Challenges & Findings

Clearly state the goals of the project. Specify key challenges of the project. If necessary, identify the strategic and supporting metrics that are most critical to address the question of the project. If presenting metrics, clearly delineate which metrics were “strategic” versus “supporting,” and briefly explain why each metric was selected.

**Section 2** – **Project Hampel** – Goals, Key Challenges & Findings

Clearly state the goals of the project. Specify key challenges of the project. Identify the strategic and supporting metrics that are most critical to address the question of the project. When presenting metrics, clearly delineate which metrics were “strategic” versus “supporting,” and briefly explain why each metric was selected.

**Section 3**: **Project Box** – Goals, Key Challenges, Findings & Recommendations

Clearly state the goals of the project. Specify key challenges of the project. Identify the strategic and supporting metrics that are most critical to address the question of the project. When presenting metrics, clearly delineate which metrics were “strategic” versus “supporting,” and briefly explain why each metric was selected. Provide recommendations that Google may wish to implement to improve revenue in late December and January every year. As part of your recommendations, include the following:

1. Outline steps Google may wish to implement that would ameliorate the late December and January revenue challenge.
2. Identify at least one high impact page that should be tested using the A/B testing methodology. Provide a screenshot of the page, why the page was selected, a brief overview of the test, and formally outline your hypothesis.
3. Explain how personalization can be leveraged to improve purchase conversion for a specific page and audience on the website.

For **Project Hampel** and **Project Box** a good starting point for areas to explore revenue changes is presented below, however this is not meant to serve as an exhaustive list, rather a starting point.

* Traffic by acquisition source
* User Location
* Device Types
* Conversions from Ecommerce
* Purchase Funnel Conversion

**Section 4: Advertising Recommendations**

Google has a $500,000 promotional advertising budget to increase website revenue over the next year. With this budget they would like to focus on promoting their products to tech savvy Midwest college students who are influential online in hopes of turning them into brand ambassadors and growing revenue by growing their online influence. You may assume that Google has 1st party user profile data detailing 70% of U.S. web users by name, age, gender, email address, city, state, and zip code. Google also has 1st party web usage data available at the user level for all Google owned properties (e.g., YouTube, YouTube TV, Fitbit, Google Accounts used for Gmail, Google Maps …)

Provide a data driven recommendation for how they should spend those dollars, including:

1. Defining how you will maximize audience potential:
   1. Identify all 1st, 2nd, or 3rd party data sources that you will use to identify Midwest college students who are influential online.
   2. Identify the top 5 demographic, psychographic, and behavioral variables to augment your list data above to support a K-means cluster analysis. Feel free to identify new variables (and accompanying data sources) not identified directly above. If new data sources are included, you should identify how Google can realistically acquire the data (e.g., public API, notate a 3rd party source selling the data …).
   3. Define the marketing outcomes for the K-means cluster analysis that you propose for measuring segment attractiveness in your cluster analysis.
   4. Detail out a data storage approach for core list data and augmentations. Would relational or a non-relational key value, graph database, column family, or document approach make the most sense? How will data in storage be accessed?
2. How should the budget be allocated by month (e.g., January 5%, February 5%, March 20% …) to market to these influencers? Justify your allocation by including at least one data source, such as Google Trends, in addition to the *Google Analytics 4* data that is available to inform how spend would be most effectively allocated.
3. Develop a channel allocation to reach these influencers leveraging Inbound Marketing, Paid Search, Social, Video and provide justification for the channel plan. Are there other media channels you would add to this list and assign budget toward?