Team Members:

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**Task we were presented with**: Find suggestions for our department's success. This involves analyzing trends and patterns of given data to find actionable insights.

## Data Sources:

We were given access to multiple databases using azure studio pertaining to fall 2023, such as customer data, product data, order data, main table. Having access to these databases it allowed us to see changes such as profit and the names of products ordered. This gave us an insight into being a business of sort, later being told that we are workers suggesting an input to the manager regarding bringing success to the department.

While having access to these databases we are trying to turn the data into meaningful insights. Looking for patterns, trends and any other type of information that develop our claim of increasing sales within the products. We focus on using the order data and product data tables to determine which products sell the most and geographically where they sell the most.

## Data preparation:

With the databases we had, we made use of Python to create graphs of certain information we wanted such as information between order and product data. Using inner join to create a connection between product data and the customer data tables. Once we had the data available creating a visualization was the next step. Since there were numerous data that had the same country for example, we determined that grouping it would minimize the entries and allow us to see the sum of the profit.

When having a substantial number of queries, the next step was to create a visual representation of patterns using Python, especially the package module Pandas, Matplotlib, Seaborn, and applications such as PowerBI to enhance visualization.

**Data Analysis:** Our data analysis focused on identifying key trends in consumer reach, global presence, consumer patterns, and sales metrics.

1) ***Unique Customers:*** One of the first trends that we tackled was the unique consumer reach within the global market which resulted in the United States having the most Unique customers of over a total 8 thousand unique customers, following that was France with over 5 thousand, and so on.
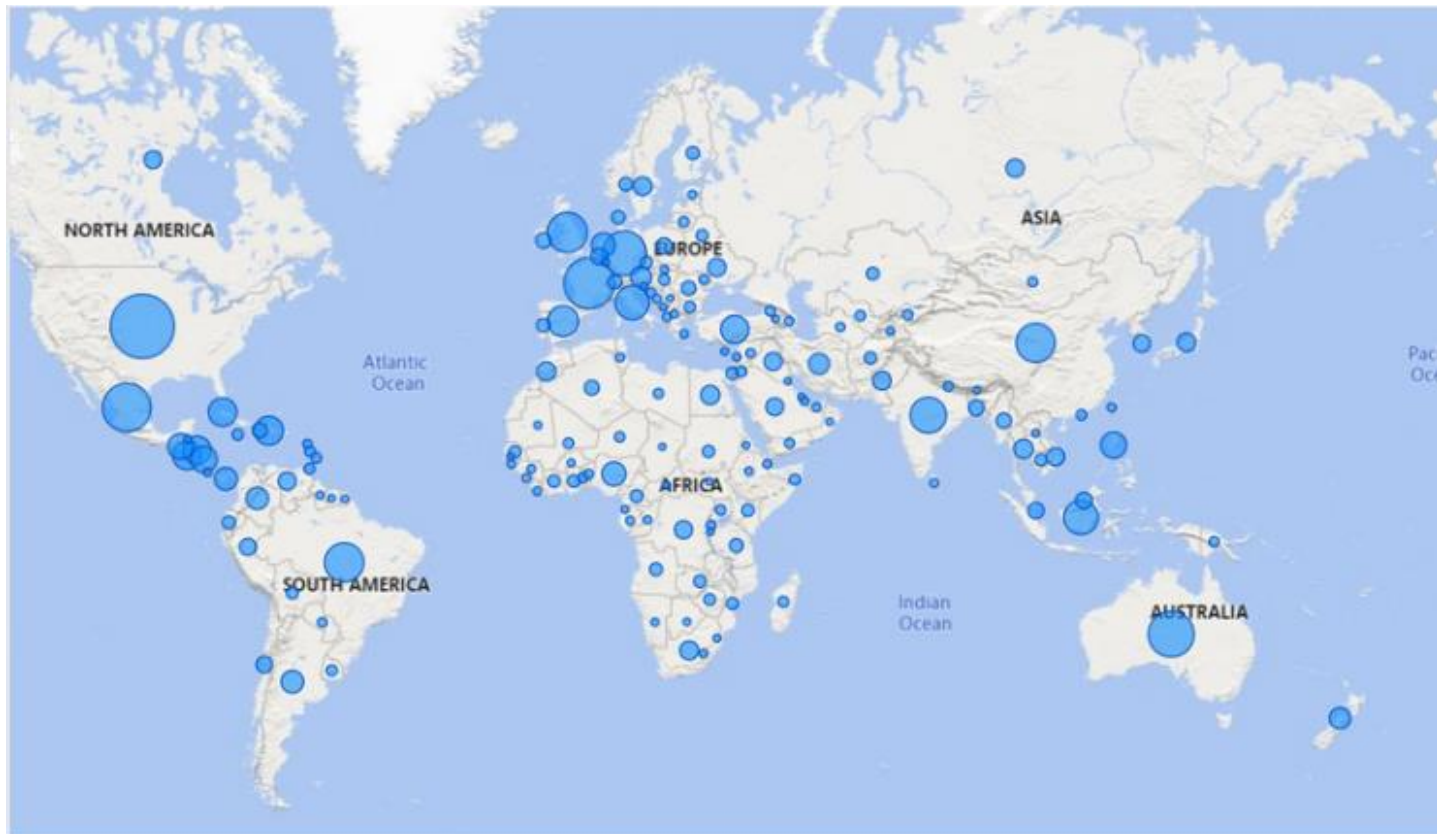


2) Well, we figured out what locations provide a substantial number of orders now we wanted to shed light on which categories these products fall into and see if there is a

pattern. In seeking the top 5 most bought categories it is show that Cleats, women apparel, and men's footwear are drastically taking over the market.

## Most Bought Categories
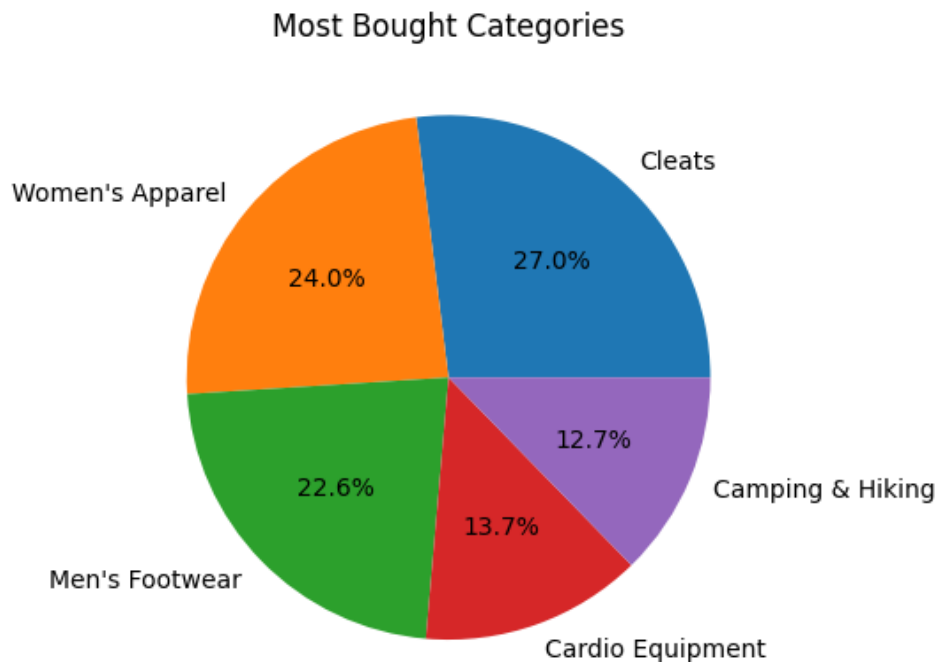


3) **Seasonal Trends within the products:** After analyzing our most brought categories, We were able to conclude the top 5 most Sold products which were the 1) Diamondback women's serene classic comfort bike, 2) Nike Men's CJ Elite 2 TD Football Cleat, 3) Nike Men's Dri-Fit victory Golf polo, 4) Nike Men's Free 5.0+ Running Shoe, and 5) Perfect Fitness Perfect Rip Deck with an overall sum of **$584,179.63** of revenue.

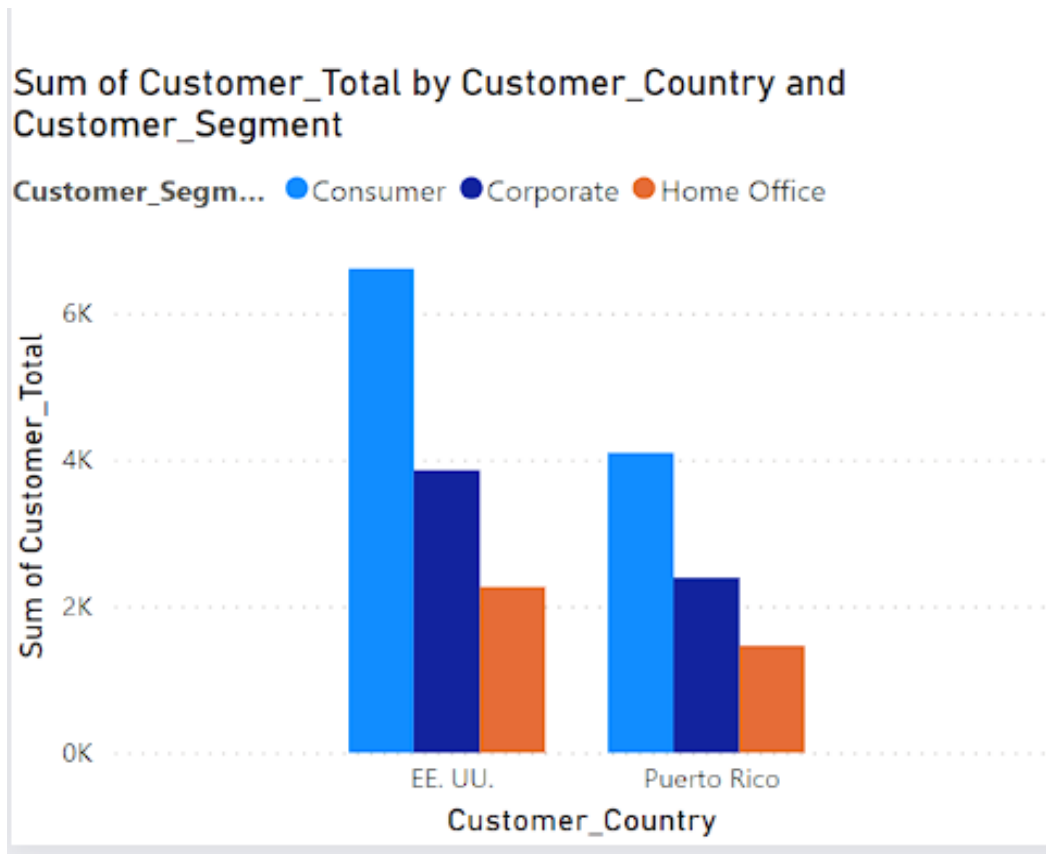| Diamondback women's serene classic comfort bike | *Nike Men's CJ Elite 2 TD Football Cleat* | Nike Men's Dri-Fit victory Golf polo | Nike Men's Free 5.0+ Running Shoe | Perfect Fitness Perfect Rip Deck |
|---|---|---|---|---|
|  |  |  |  |  |

Seasonal Sales Trends of Top 5 Products
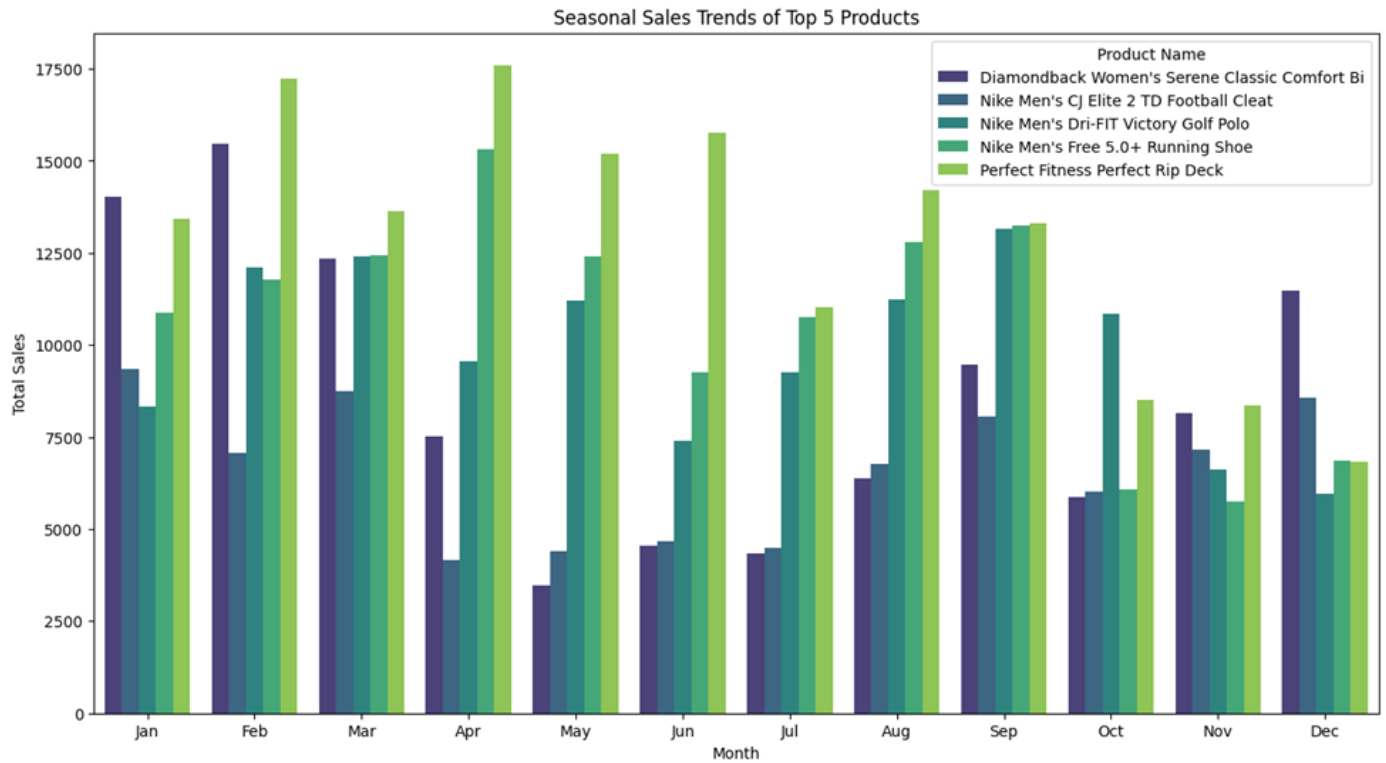
We were also able to find that in regards to seasonal trends in Quarter 2 from April to June overall all products did exceptionally well in comparison to Quarter 1, 3, and 4 when it came to sales.
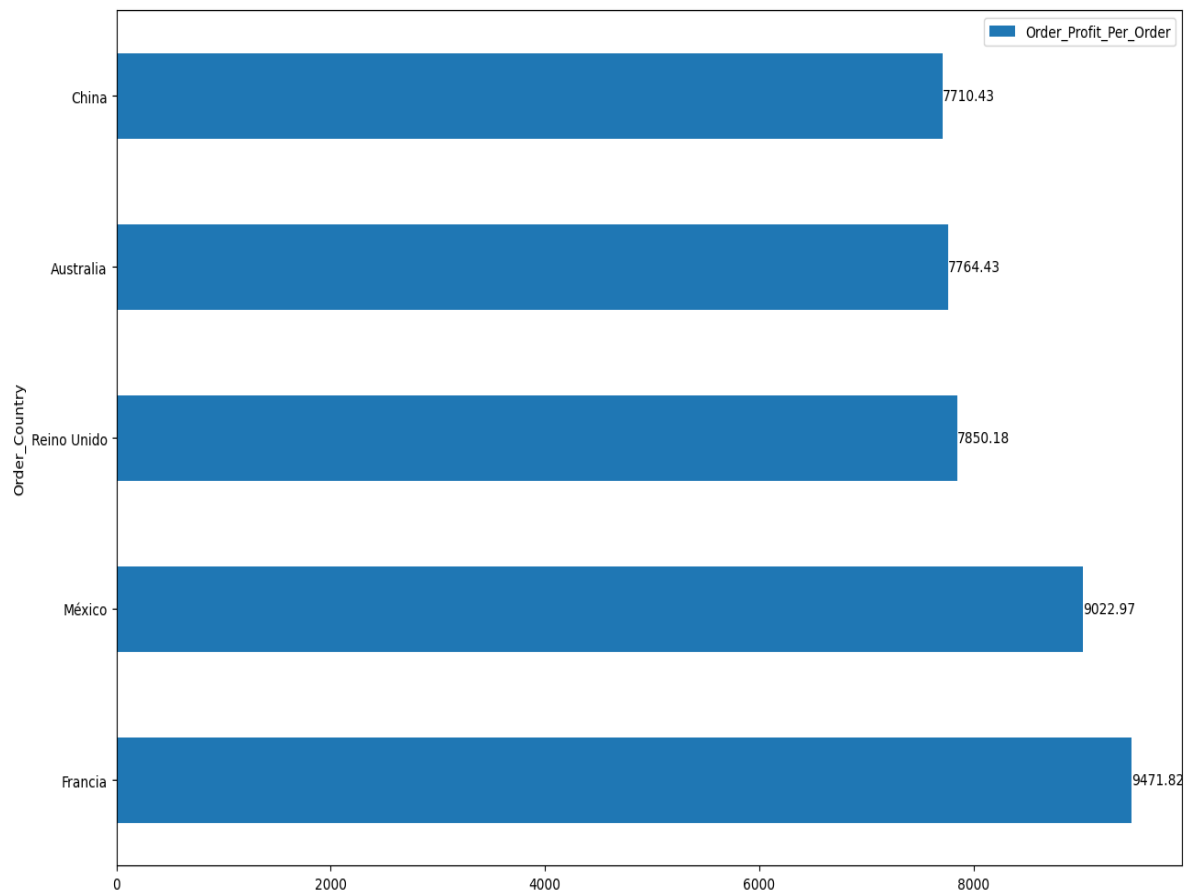
**4)  *Consumers patters:***

A) Another trend we were able to analyze was the sum of the consumer segment by the customers and countries. This bar chart provides a comparative analysis of customer totals across three segments: Consumer, Corporate, and Home Office focusing on two regions, The United States and Puerto Rico. The striking aspect of the graph is the prevalence of the consumer segment in the United States, which is over nearly 13 thousand in comparison to Puerto Rico with over 8 thousand.
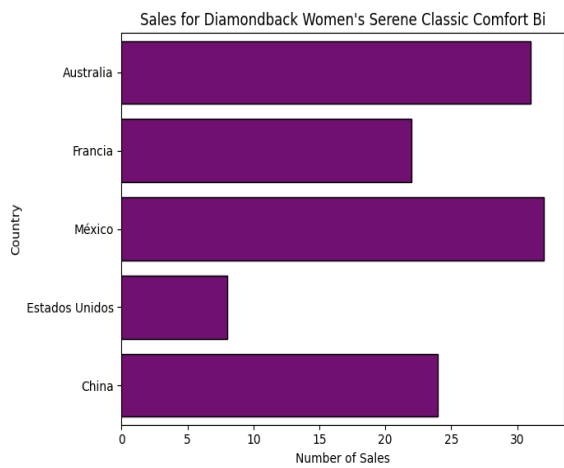
Consumer segment-

## Sum of Customer_Total by Customer_Country and Customer_Segment

Customer_Segm... ● Consumer ● Corporate ● Home Office

[Bar chart showing Sum of Customer_Total by Customer_Country (EE. UU. and Puerto Rico) across three segments. EE. UU.: Consumer ~6.5K, Corporate ~3.9K, Home Office ~2.2K. Puerto Rico: Consumer ~4.1K, Corporate ~2.3K, Home Office ~1.5K.]
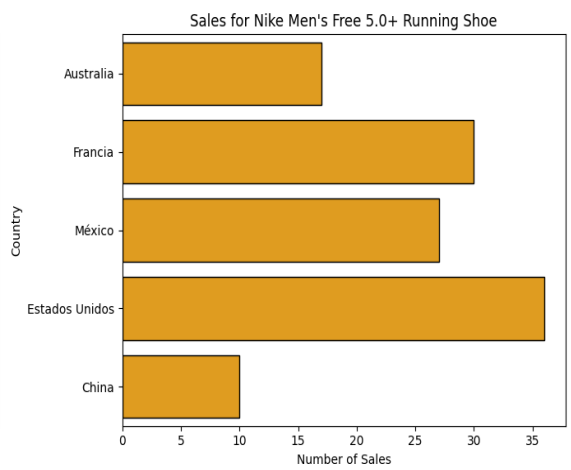
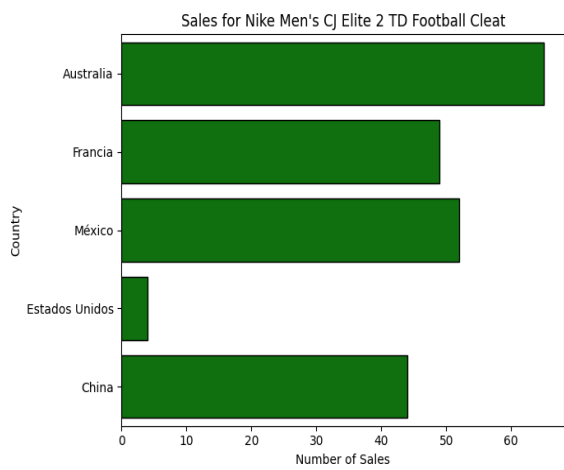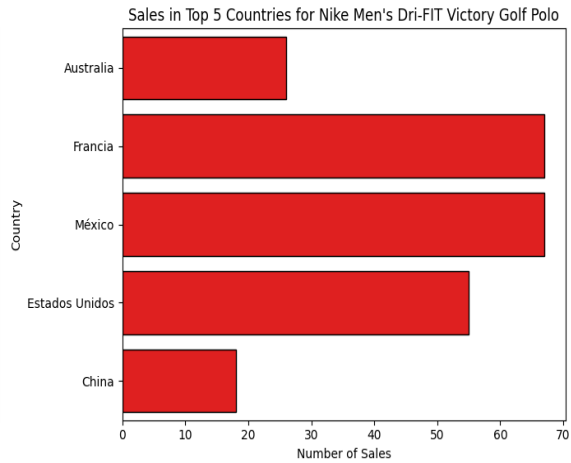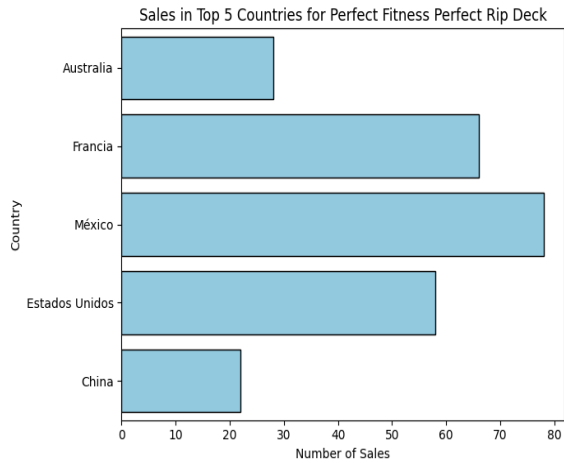**5) *Order profit per order:***

*Order profit per order- Figuring* out the most profitable country allows us to see which markets we should invest in. Should it be Europe, Asia, or the United States, from adding up the profit of each country we came to realize France bought us the most profit but exactly what were they buying and how about the other 4.

Sales in Top 5 Countries for Perfect Fitness Perfect Rip Deck



Sales in Top 5 Countries for Nike Men's Dri-FIT Victory Golf Polo



Sales for Nike Men's CJ Elite 2 TD Football Cleat



Sales for Nike Men's Free 5.0+ Running Shoe



Sales for Diamondback Women's Serene Classic Comfort Bi

Perfect Rick deck:

- This graph showcases that in countries such as Mexico are heavily influence with the perfect Rip deck Product.

Football cleats:

- In comparison to the other countries we see that the Nike Football cleats sold the most in Australia mainly because it is highly influence by sports such as soccer or more known as football since there is over 1.7 million people who play soccer, being ranked #25 in the FIFA rankings, and extending their kit partnership with Nike for 10 years According to the Nike's Website

Comfort Bike:

- Regarding the comfort Bike Mexico sits at the throne with the most sales mainly because out of the 5.9 million homes in Mexico, 35.9% have at least one bikes and 33.6% are women cyclist.

Nike Men's Dri-Fit victory Golf polo-

- Following the heavily influence brand deals with NIKE from counties such as Mexico and France   Dri-FIT Golf polo shirt was also sold the most in this country out of the 5.

Nike Men's Free 5.0+ Running Shoe

- The United States comes at #1 when it comes to sales from NIKE Men's Running shoes mainly because there are over 1,100 marathons held in the United States yearly with a sum of 500 thousand runners, and as NIKE is the major sportswear manufacturer there is, it has played vital roles within these marathons through sponsorship, and providing running gear such as shoes.

**Conclusion:** Our thorough analysis of customer behavior and sales trends shows the vast popularity of active wear throughout various countries. With the market valuing around 303 million USD in 2021 it is projected to grow at an annual growth rate of 6.1% from 2023 to 2032.

This indicates the need for our organization to adapt and evolve within the digital environments examples such as Australia having less than 40% in online sales. This is crucial to enhance our market presence and increase profitability. To address this, we have developed a focused roadmap, which aims to improve brand visibility, strengthen customer engagement, and boost sales concluding to 4 phases.

**Phase 1: Target Audience Identification**

Month 1-2

*Research & Analysis*

- Conduct market research to understand product popularity trends with in the top 5 countries sales
- Analyze demographic data to confirm the active age group of 18-34 years old on TikTok and Instagram.

*Planning*

- Develop a detailed profile of our target audience, including interests and online behavior.

**Phase 2: Budget and Content Strategy**

Month 3

*Budgeting*

- Invest $10,000 in social media advertising.

*Content Development*

Design and create engaging content:

- Highlight features of the Nike Men's Free 5.0+ Running Shoe for the U.S. audience, and following the pattern for the top 5 most sold products from the top 5 countries

**Phase 3: Ad Execution and Monitoring**

Month 4-9

*Ad Deployment*

- Schedule and launch ads primarily during peak times such as evenings and weekends.

*Monitoring*

- Continuously track and analyze the performance of the ads.
- Gather data on engagement, reach, and conversion rates.

## Phase 4: Optimization and Future Planning

Month 9-12

*Review & Adjust*

- Assess ad performance and adjust the budget as needed.

*Strategic Planning*

- Plan for the following quarters of the following year, focusing on the trends such as New Years Resolutions related to fitness and sports of increased interest in sporting equipment for Quarter 2.

This roadmap provides a structured approach, from initial market analysis to execution and future planning, ensuring a cohesive and effective marketing strategy for our products.

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