**DAB303\_Marketing Analytics**

**Project Proposal**

**Nike Sportswear Product Analysis**

**Introduction and Motivation:**

I have chosen to work on analysing the Nike Sportswear Product dataset for my college project. The main reason for selecting this topic is my interest in the sportswear industry and the opportunity to gain insights into customer preferences, trends, and purchasing behaviour. This project aims to analyse the dataset, explore its attributes, and extract meaningful information that can enhance our understanding of Nike's product offerings.

**Dataset:**

The dataset I will be working with is the Nike Sportswear Product dataset sourced from [Kaggle](https://www.kaggle.com/datasets/polartech/nike-sportwear-product-dataset). The Nike Sportswear Product dataset available at the provided Kaggle link is a comprehensive collection of information related to Nike sportswear products. It contains a total of 229,472 rows and 23 columns, making it a substantial dataset for analysis.  
Each row in the dataset represents a Nike sportswear product, while the columns provide various attributes and details about these products. It can potentially be used for various analytical purposes, including exploratory data analysis, product segmentation, recommendation system development, and trend analysis.

Dataset link: <https://www.kaggle.com/datasets/polartech/nike-sportwear-product-dataset>

**Features Description:**

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| --- | --- |
| **Feature** | **Description** |
| **DEPARTMENT** | The department or category of the product such as Men, Women, Kids. |
| **CATEGORY** | The specific category of the product within the department. |
| **SUBCATEGORY** | Further classification of the product within the category. |
| **SKU** | Stock Keeping Unit, a unique identifier for each product variant. |
| **SKU\_VARIANT** | Variant identifier for the product, indicating different versions or options available. |
| **PRODUCT\_NAME** | The name or description of the product. |
| **PRODUCT\_ID** | Unique identifier for each product. |
| **TITLE** | The title or headline associated with the product. |
| **PRODUCT\_TYPE** | The type or nature of the product. |
| **PRODUCT\_URL** | The URL or link to the product page on Nike's website. |
| **PRODUCT\_SIZE** | The size or dimensions of the product. |
| **LABEL** | A label or tag associated with the product. |
| **IS\_BESTSELLER** | A Boolean indicator (True/False) indicating whether the product is a bestseller. |
| **COLOR** | The color of the product. |
| **BRAND** | The brand or manufacturer of the product. |
| **AVAILABILITY** | The availability status of the product. |
| **CURRENCY** | The currency used for pricing information. |
| **PRICE\_CURRENT** | The current price of the product. |
| **PRICE\_RETAIL** | The retail price or original price of the product. |

**Market Problem:**

After exploring the dataset, I have identified a potential problem related to product recommendations and customer satisfaction. While Nike offers a wide range of sportswear products, customers may struggle to find products that align with their preferences and needs. Additionally, understanding customer sentiments and preferences can be challenging without customer reviews and ratings.

**Problem Approach/Solving the Problem:**

To address this problem, I propose to perform an analysis of the Nike Sportswear Product dataset and develop a recommendation system based on product attributes and popularity. This will help customers find relevant products and enhance their shopping experience. Additionally, analysing product attributes and popularity will provide insights into customer preferences and identify areas for improvement.

My approach will involve the following steps:

1. Data Cleaning: I will clean the dataset by handling missing values, removing duplicates, and ensuring data consistency.
2. Exploratory Data Analysis: I will perform exploratory data analysis to gain insights into the Nike sportswear product categories, identify popular products, and understand the distribution of prices.
3. Attribute Analysis: I will analyse the product attributes such as category, subcategory, and description to understand the preferences of customers.
4. Popularity Analysis: I will analyse the popularity of products based on the number of times they appear in the dataset. This will help identify popular products across different categories and subcategories.
5. Conclusion: I will summarize my findings, provide insights into customer preferences, and propose actionable recommendations for Nike to improve customer satisfaction and product offerings.

**Tools:**

To conduct this analysis, I will be using the following tools:

* Python: I will use Python programming language along with libraries such as NumPy, Pandas, and Scikit-learn for data cleaning, exploratory data analysis, etc.
* Jupyter Notebook: I will use Jupyter Notebook as my development environment.
* Tableau: I may also use Tableau for creating interactive visualizations to enhance the presentation of my findings.

**Timeline:**

Managing a project timeline is crucial for effective project management. I estimate that the project has the potential to finish within a time span of five to seven weeks.

**Archit Navadiya**