Customer Behavior Analysis

DAB 303 – Project 3

Agenda

- Business objective of the project
- About Customer Behavior Analysis
- Implementation methodology
- Submission details

Business Objective

Business Objective of the Project

- Understand and gain insights from an e-Commerce dataset, by performing various exploratory data analysis, data visualization, and data modelling tasks
- Focus specifically on Customer Behavior Analysis (notions, applications, etc.)
- Perform Advanced Data Science Analysis

Customer Behavior Analysis

Customer Behavior Analysis

- In marketing, *Customer Behavior* refers to an individual's buying habits, including social trends, frequency patterns, and background factors influencing their decision to buy something. Businesses today study customer behavior to understand their target audience and create more-enticing products and service offers
- Customer behavior Analysis doesn't describe who is shopping in your stores, but rather how customers are shopping in your stores. It reviews factors like shopping frequency, product preferences, and how your marketing, sales, and services offers are perceived. Understanding these details helps businesses communicate with customers in a productive and delightful way
- There are three factors that influence customer behavior:
  - Personal,
  - Psychological, and
  - Social

Methodology

Methodology (I)

- The project is spread over 2 weeks
- Description of the various steps will be presented (Jupyter Notebook). You need to:
  - Review the provided directions and business logic
  - Develop the needed code,
  - Secure that the final code is error free,
  - Explain the code with extended commenting,
  - Further explain the business logic, adding detailed description in the Jupyter Notebook, and
  - Include all code output on the Jupyter Notebook
- presentation must include insights (through visualizations), and recommendations

Methodology (II)

1. Data Import
2. Data Overview
3. Data Cleansing (Missing Values, duplicates, etc.)
4. Exploratory Data Analysis (EDA)
5. Statistical Analysis
6. Create various visuals using Python Packages
7. Variable distribution
8. Variable Summary
9. Correlation Matrix
10. Data Pre-Processing for Model Building
11. Model Building

Methodology (III)

- Prepare a final report presentation (~ 13-15 pages):
  - Record your observations with respect to the analysis done,
  - Use your findings to identify significant Customer Behavior Patterns, and
  - Devise a high-level marketing strategy to entice these individuals to continue using the service.

Submission

Submission

Submission will be done via Blackboard, and it will be a group submission, including:

- One file per group (in .zip format):
  - Jupyter Notebook (Including extended code commenting and analytical block code description):
    - Lab file (.ipynb)
    - Exported Jupyter notebook in html (.html)
  - Presentation (.pptx): 13 – 15 slides, for presenting your findings to the management