**CAPSTONE PROJECT SUMMARY**

**Instructions:**

1. Please fill in all the required information.
2. Avoid grammatical errors.

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| **GitHub link**- https://github.com/Sandipan0303/Unsupervised-online-retail-customer-segmentation.git |

**Please write a short summary of your Capstone project and its components. Describe the problem statement, your approaches and your conclusions. (200-400 words) Problem Statement:**

In this project, your task is to identify major customer segments on a transnational data set which contains all the transactions occurring between 01/12/2010 and 09/12/2011 for a UK-based and registered non-store online retail. The company mainly sells unique all-occasion gifts. Many customers of the company are wholesalers.

### Attribute Information:

### Invoice No: Invoice number. Nominal, a 6-digit integral number uniquely assigned to each transaction. If this code starts with letter 'c', it indicates a cancellation.

### Stock Code: Product (item) code. Nominal, a 5-digit integral number uniquely assigned to each distinct product.

### Description: Product (item) name. Nominal.

### Quantity: The quantities of each product (item) per transaction. Numeric.

### Invoice Date: Invoice Date and time. Numeric, the day and time when each transaction was generated.

### Unit Price: Unit price. Numeric, Product price per unit in sterling.

### Customer ID: Customer number. Nominal, a 5-digit integral number uniquely assigned to each customer.

### Country: Country name. Nominal, the name of the country where each customer resides.

### Summary:

#### Our dataset contains data from 37 different nations, with the United Kingdom having the most orders, followed by Germany, and countries like Saudi Arabia and Bahrain having the fewest orders. It is safe to believe that the European economy has always been strong, and businesses should develop plans to increase their sales in Middle Eastern nations. Because there are more orders coming from the United Kingdom, there are also more clients coming from this country alone. When compared to other items, the demand for WHITE HANGING HEART T-LIGHT HOLDER is higher. It is reasonable to believe that this product's quality will be satisfactory given both its demand in the European market most of the sales are generated from there only. It can be a type of a warm cloth as weather in Europe is comparatively cooler the other parts. The demand of NEW BAROQUE B'FLY NECKLACE CRYSTAL is the lowest followed by PINK DAISY BAG CHARM. It is clearly visible that Women's usable products demands are very less. It might be Women might not be very much comfortable with online shopping. From the weekly daily sales, we can see that sales are more in weekdays and along with that the timing of the sales is more during the afternoon time. It can be well assumed that during working days when people get break for lunch during afternoon at that time they place their orders. Sales are more during the month of November might be due to Christmas as Christmas shopping takes place even in places like Germany Tollywood winter festival takes place.

As we can see, tier 1 consumers are those that have a high buying frequency and good financial spending, but a low recency, which indicates they have not recently made a purchase. Stores should investigate the cause of their less recent purchases and take action to boost them. We can see that tier 2 clients did reasonably well financially and are frequent buyers of the products, although they have not recently made purchases. Stores should investigate the cause of their less recent purchases and take action to boost them. As we can see, tier 3 customers did not make financial contributions and were not frequent buyers, but they lately began doing so. So, retailers should figure out what different they did with tier 3 customers and try to implement the same with tier 1 and tier 2 customers as well to increase recency.