

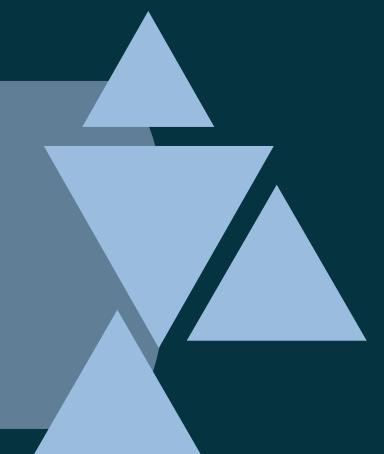


Presentation

UNSUPERVISED LEARNING

E-Commerce RFM Analysis

Audric Lysander



OUR AGENDA





THE ★ OBJECTIVE ★

BACKGROUND

E-commerce has become a new channel to support businesses development. Through e-commerce, businesses can get access and establish a wider market presence by providing cheaper and more efficient distribution channels for their products or services. E-commerce has also changed the way people shop and consume products and services. Many people are turning to their computers or smart devices to order goods, which can easily be delivered to their homes.





GOALS



GATHER USEFUL INTRINSIC INFORMATION BY COMBINING
RFM MODEL AND SOME UNSUPERVISED LEARNING MODEL.



CHALLENGE



Huge amount of data



There are many missing values

METHODOLOGY



Preprocessing



RFM Model Building



Exploratory Data Analysis



Predictive Model Building



DATA PREPARATION

★ PREPARATION ★

INITIAL DATA QUALITY REPORT

Total of 541.909 data

7 Columns

135.080 Missing Values

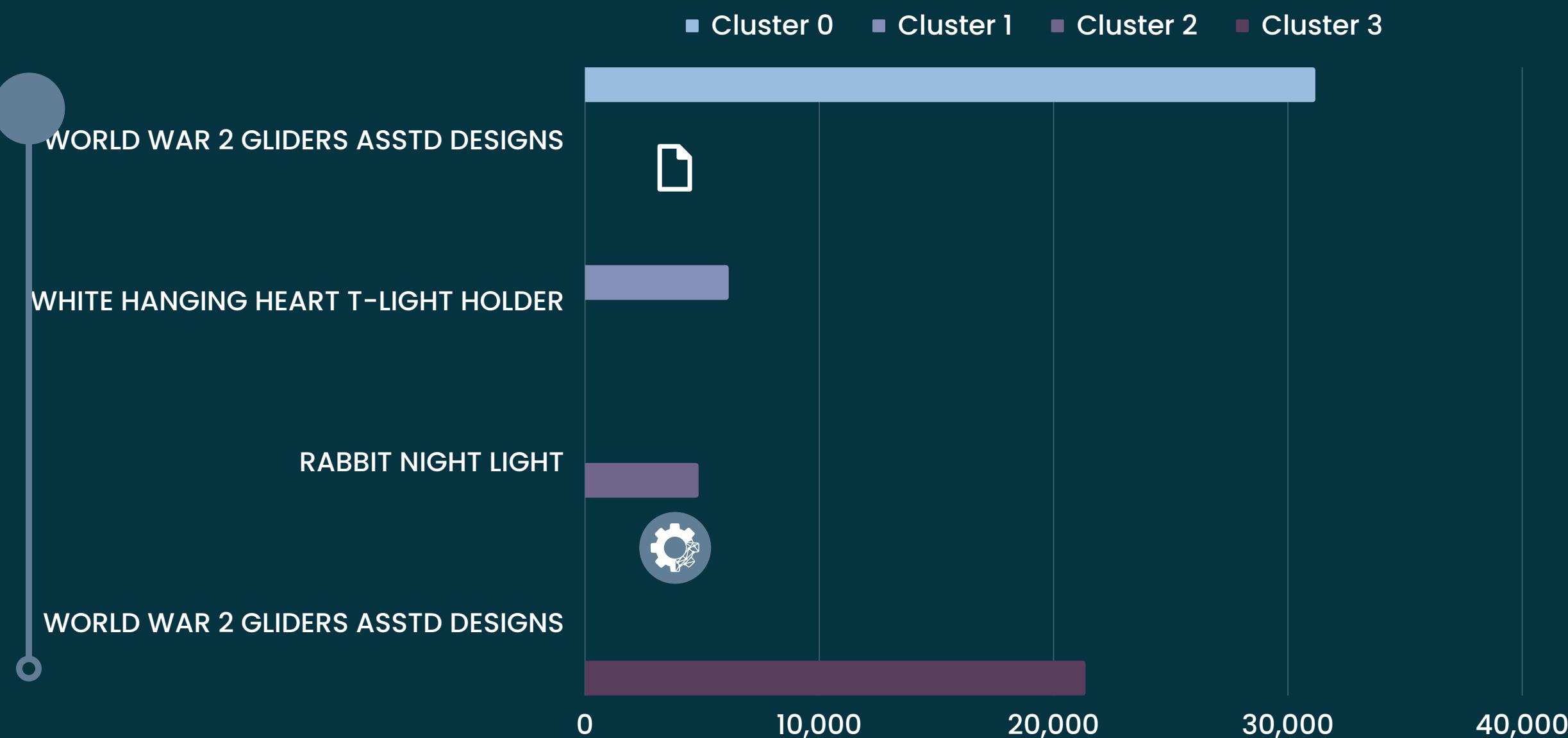
PREPARATION STEPS & PROCESS





ANALYSIS ★ FINDING ★

WHAT ARE THE MOST FREQUENT PURCHASED PRODUCTS?



The bar chart on the side is the most frequently purchased item from each cluster. It can be seen that cluster 0 has the highest purchases of 1 type of product.

WHAT ARE THE INTERVAL DATE BETWEEN TRANSACTIONS?

Cluster	Min	Max
0	0 day	373 days
1	0 day	24 days
2	1 day	1 day
3	0 day	113 days

From the table next to it, it can be seen that overall the minimum number of days needed for the most recent transaction is only 0-1 day after the last transaction, while for the most recent maximum transaction it takes 373 days and at least takes 1 day (because cluster 2 only takes have 1 customer data).

RECOMMENDATION

- As a whole, lots of transactions were canceled because the store lacked stock to ship, so before that you could check the available stock first and enter the available stock into the system, so that the customer cannot place an order if the stock runs out.
- Cluster 0 is a cluster that rarely makes transactions, so discount vouchers and free shipping can be made to create a buying habit.

RECOMMENDATION

- Cluster 3 is a cluster that conducts transactions more often than cluster 1. What can be done is to provide free shipping. At this stage the customer has increased his buying habits, so there is no need to provide discount vouchers because the customer will be more focused on the shipping price.
- Cluster 1 is a cluster that frequently conducts transactions. In this cluster, to protect customers, loyalty can be given.

RECOMMENDATION

- Cluster 2 is the cluster that buys the most. To maintain and increase sales, loyalty and cashback vouchers can be given with a low percentage, a relatively high minimum purchase, and a cashback limit that can be earned.

THANK YOU

Contact:



audriclysander@gmail.com



linkedin.com/in/audriclysander



github.com/AudricLysander

