

PHASE 4 PROJECT



ONLINE RETAIL RECOMMENDATION SYSTEMS

Moringa School | 2022

PHASE 4 PROJECT

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Agenda

Business Understanding
Data Understanding
Data Preparation
Modeling
Recommendations
Next Steps



/02

/03

Business Understanding

Overview

Online shopping refers to a **delivery and pick-up service**. This particular service is offered by companies through a **website and mobile app**.



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Business Understanding

Problem Statement

One of the biggest challenges that **new retailers** trying to start a business face is that they have a variety of **products to choose** from in order to come up with their catalog.

In most cases these retailers are not able to get this information and therefore this can have a negative **impact on their businesses**.



Source

Our data set is from [UCI Machine Learning Repository](#).

About

It is from an non-store online shop selling unique gifts .

Period

From 2010 December to 2011 December.

Data Understanding

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I Data Preparation

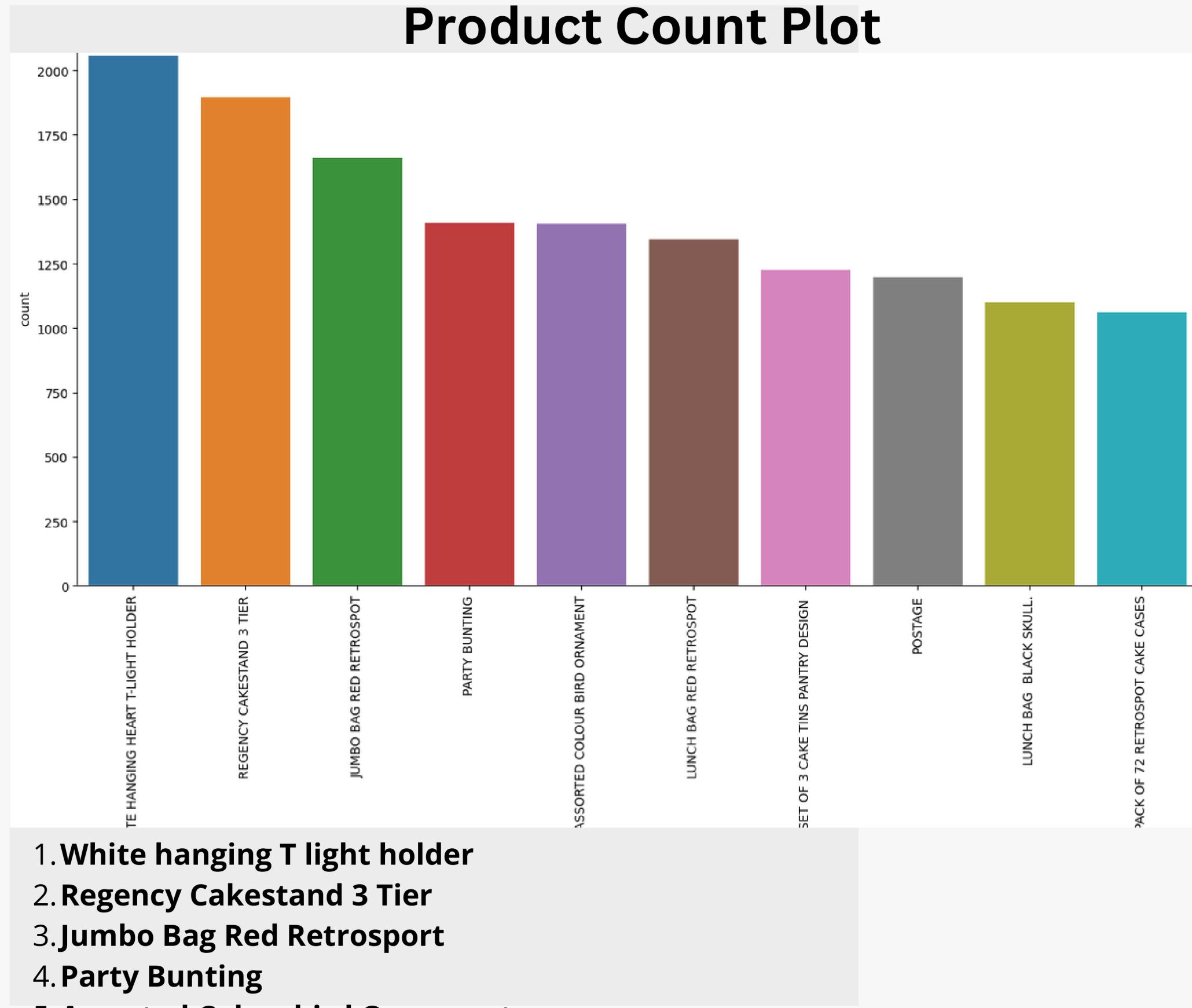


- Cleaning
- Exploratory Data Analysis (EDA)

Univariate Analysis

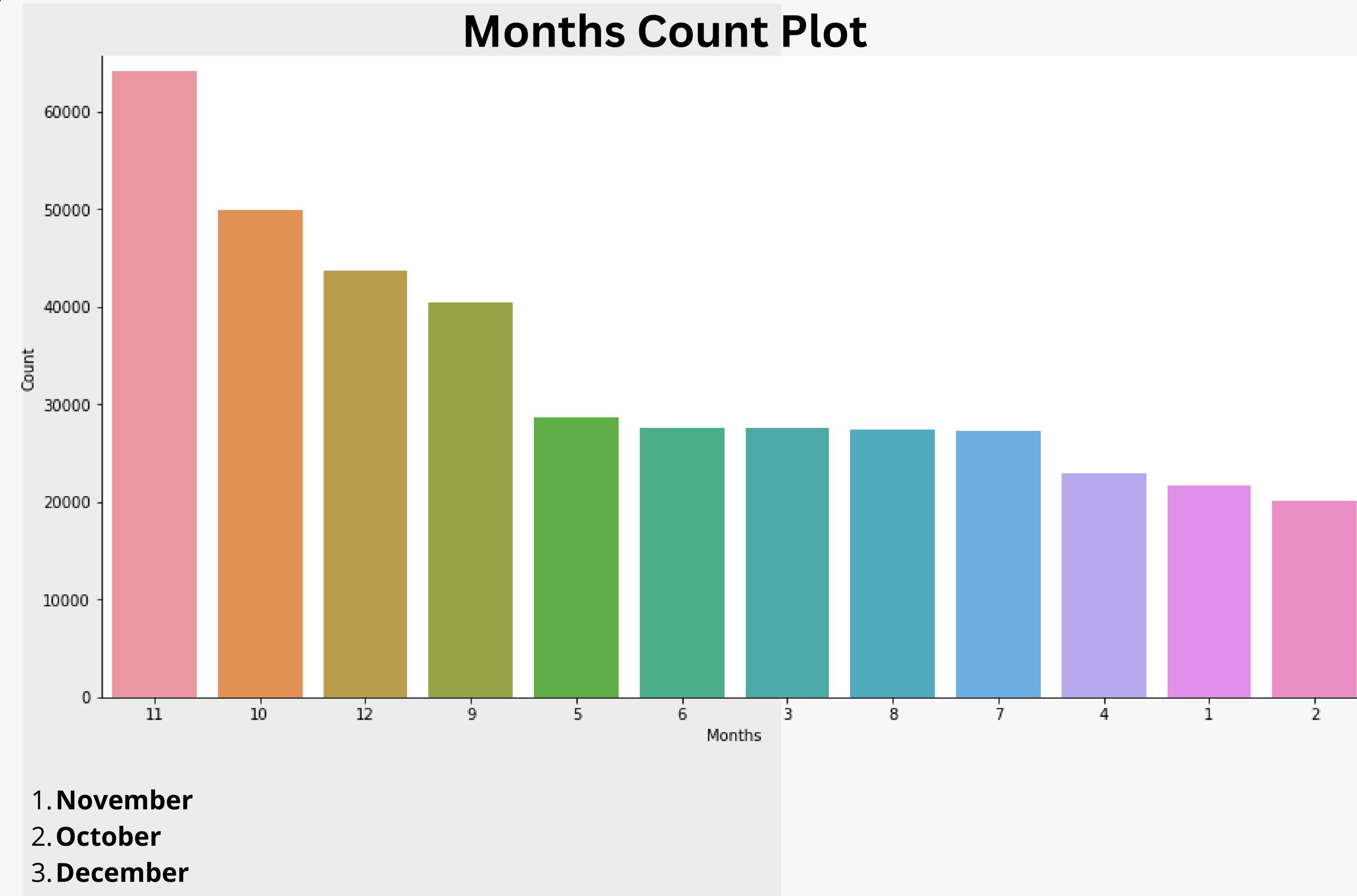
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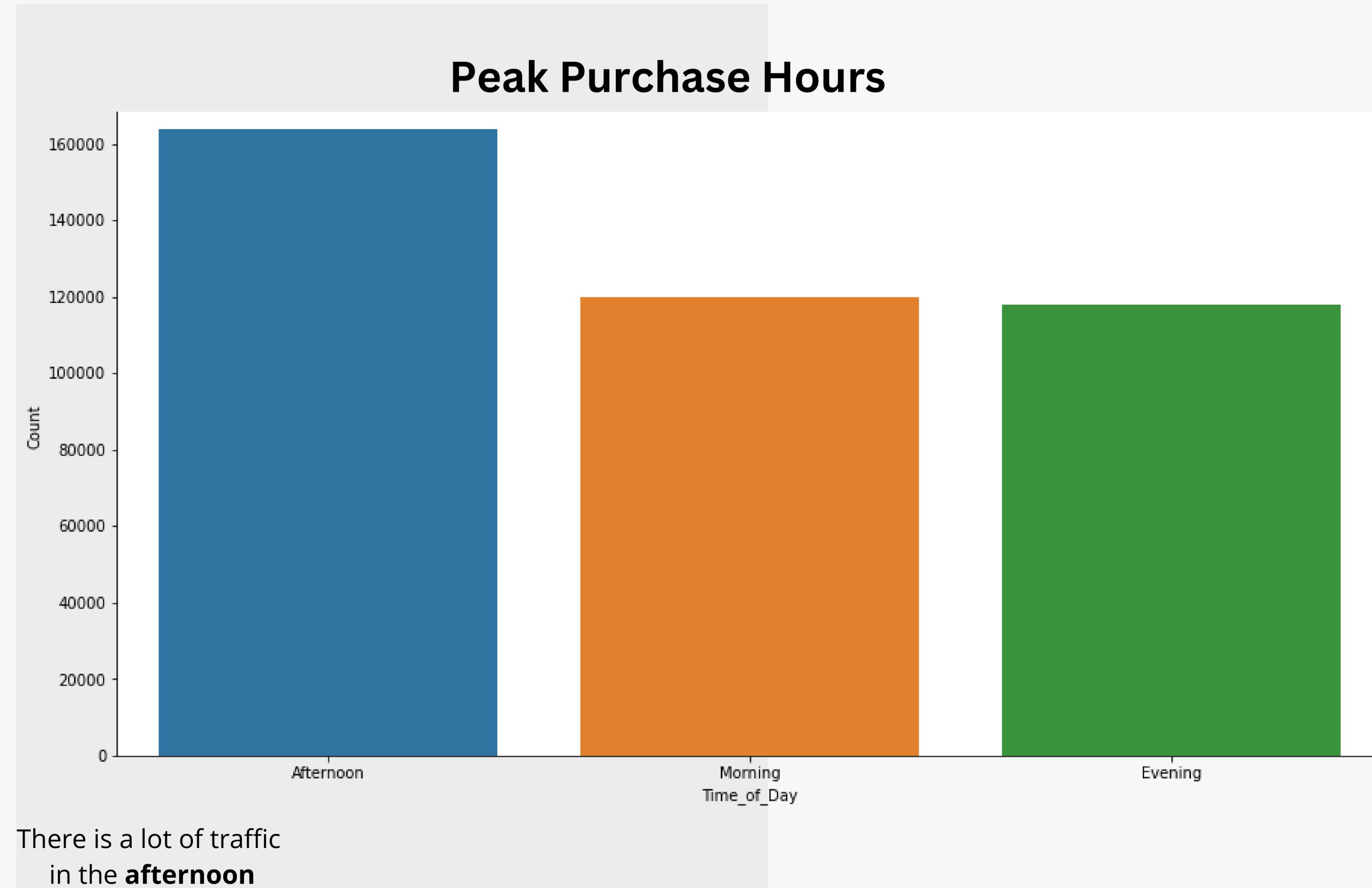


Top 10
Products

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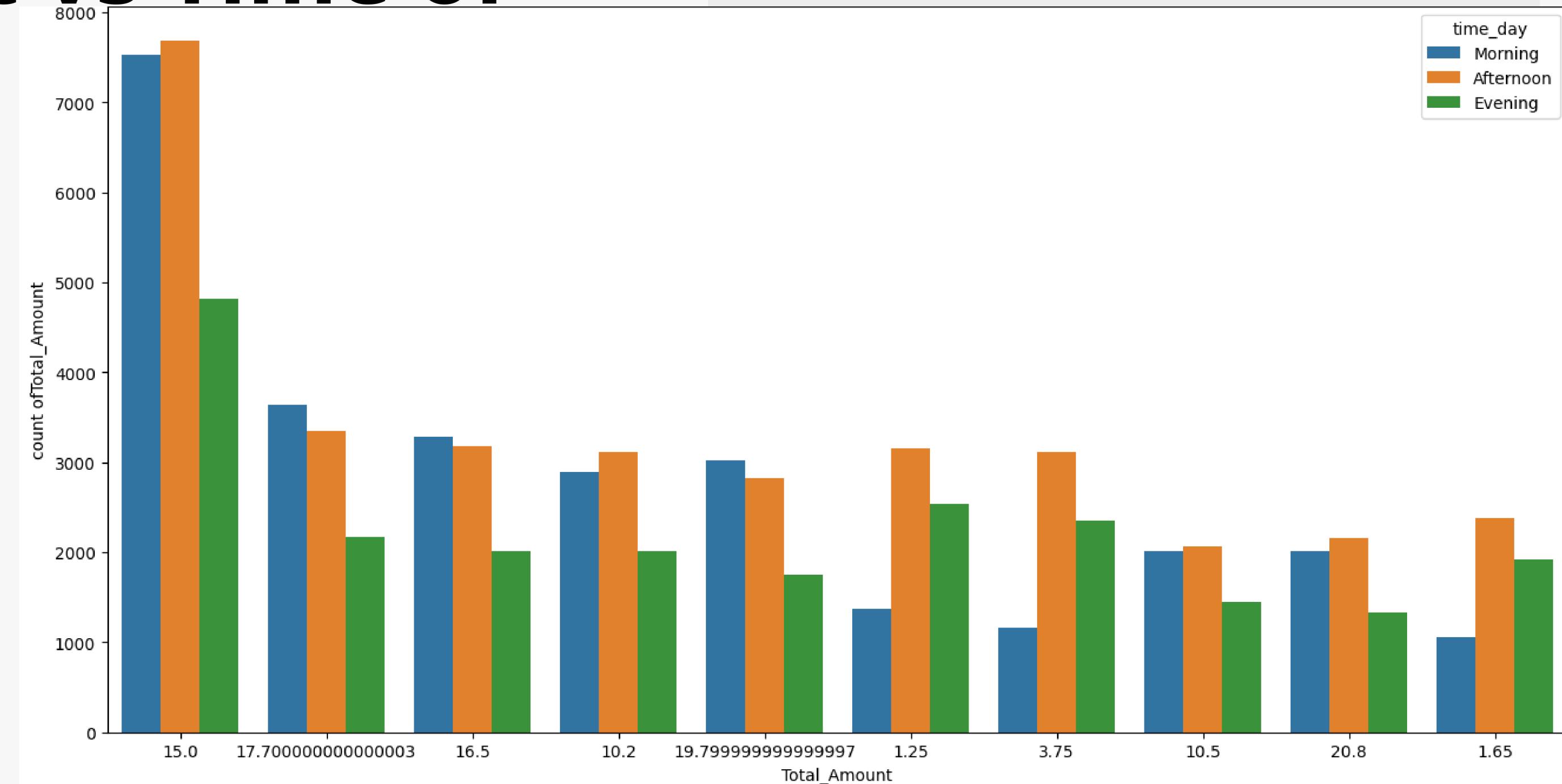
Months
Ranked



Daily Traffic

Amount vs Time of Day

Bivariate Analysis



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Collaborative Filtering

Memory_Based

We used Cosine Similarity to recommend various Products to customers.

We also used KNNwith means where we got an RMSE of 0.244

Model_Based

We used the SVD model to create our model and test our data. Here we got an RMSE of 0.364

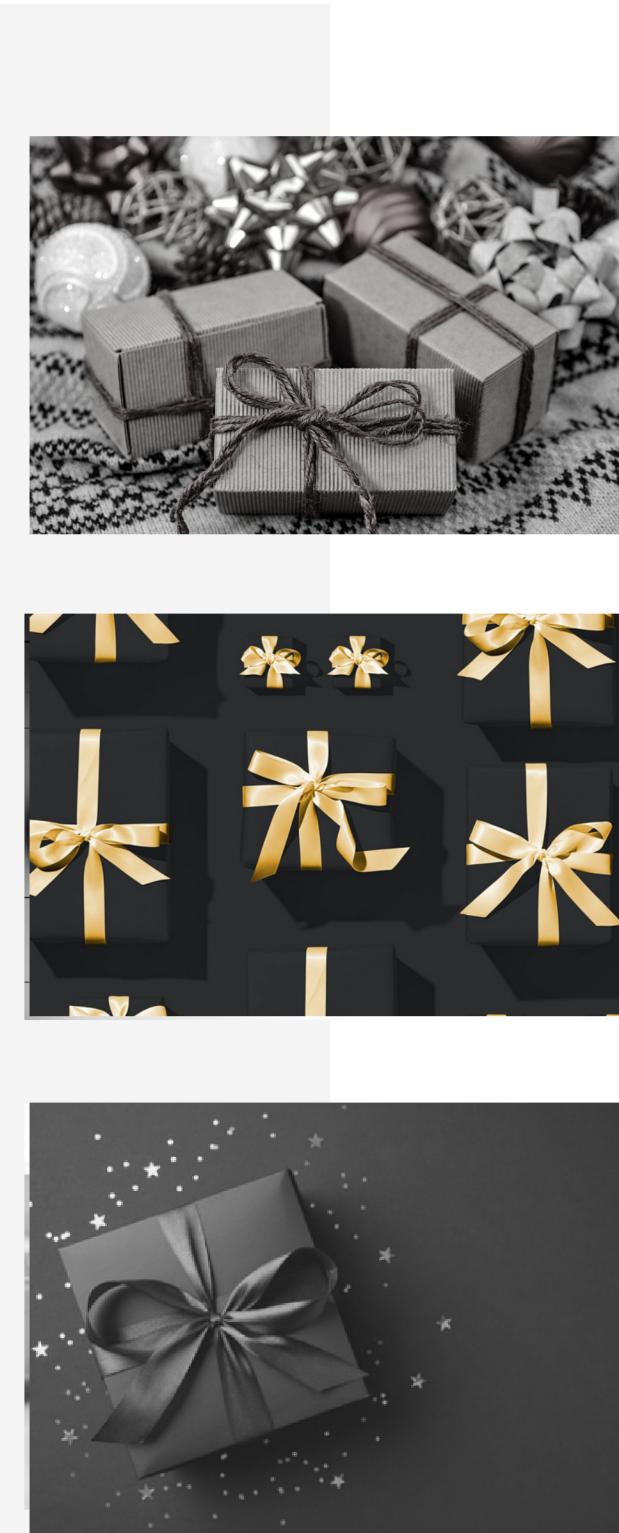
Modeling

Modeling

	KNN	SVD
RMSE	0.244	0.364
CV RMSE	0.246	0.363

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RECOMMENDATION



Products, Months, Daily Traffic

White hanging light holder is the most popular, November has the highest orders and Afternoon is the peak time of the day.

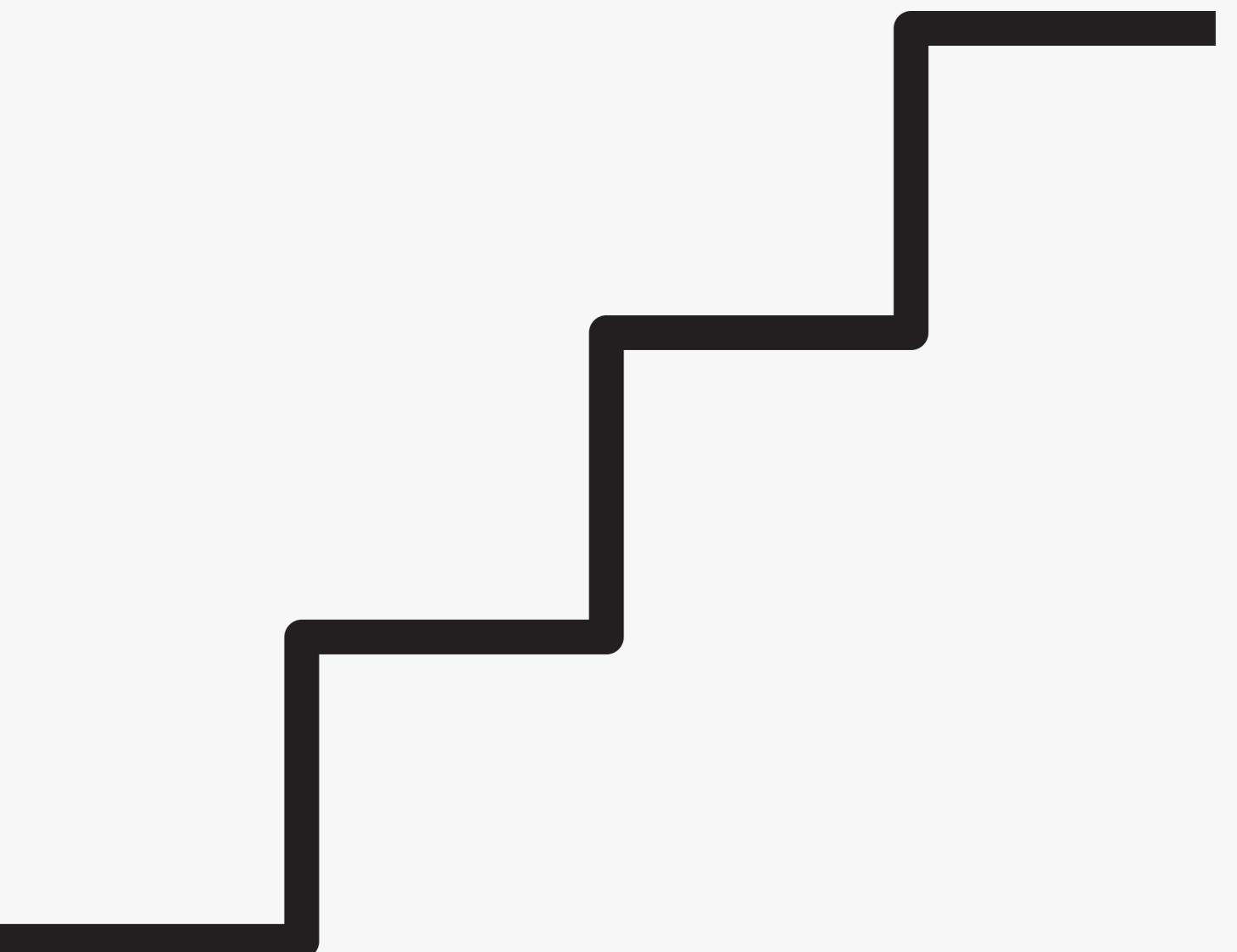
Recommending Products to Customers

Our Memory_based model and Model_based model are able to recommend products to customers .

This can therefore be used by both new customers and existing customers.

Deployment of the model

Next
Steps





**Thank
you!**

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