Ecommerce Purchase Prediction

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Introduction

Client is an ecommerce company that wants to increase their sales revenue by targeting customers who are more likely to make a purchase.

Problem Statement:

Failure to identify which customers are more likely to make a purchase based on their purchase behavior. i.e. behaviour on the website.

A brief introduction to the dataset used

This dataset contains the online shoppers' behaviors and intentions from a leading Brazilian e-commerce company. The dataset consists of 12,330 online sessions from their website. 84.5% (10,422) didn't purchase anything and the 15.5 % (1908) purchased one or more items.
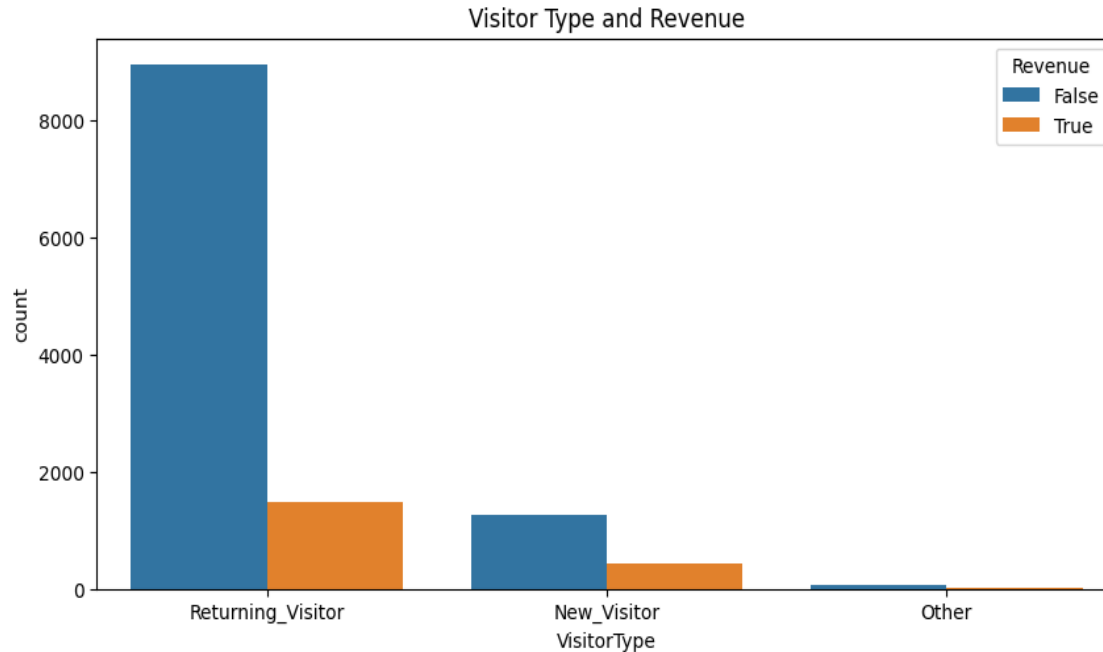
Some of the data categories used in this analysis include:

1. Customer location

2. Type of visitor

3. Type of browser used

4. day of the week

5. revenue

6. amount of time spent on a page etc.

Target/Goal:

Determine what factors influence the customer's ability to make a purchase.

Visual 1 - Relationship Between Website Visitors and Revenue
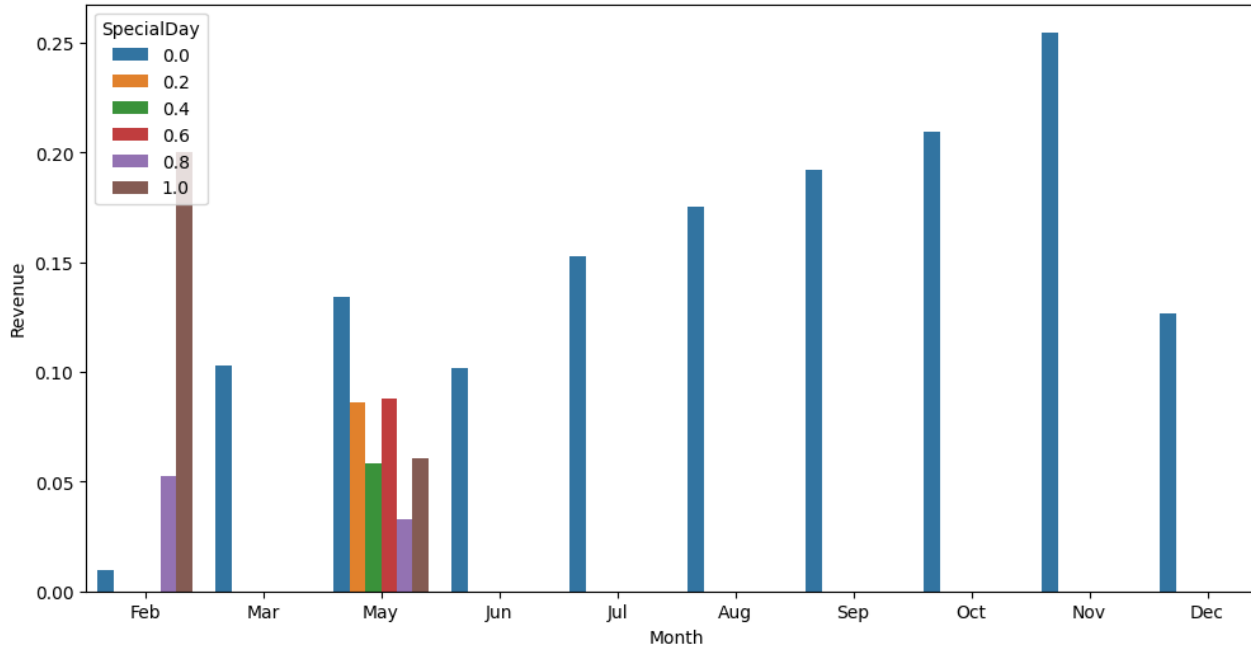

Findings:

Returning visitors are more likely to make a purchase and they return because of quality goods and services..

Insight:
Emphasis on in-app advertisement because returning visitors are the one that are most likely to make a purchase

Visual 2 - Relationship Between Month, Revenue and Special/Public Holidays

Comparison/Relationship between Month, Revenue and Special Day

Findings:

1. Certain months, such as November and October, appear to have higher sales than other months.

2. Visitors who visit the website on special days are more likely to make a purchase.

Insight:

1. Timing marketing and promotions around high-sales months could drive sales.
2. Creating targeted campaigns and promotions around special days could lead to increased sales

Visual 2 - Feature Importance

Feature Importance
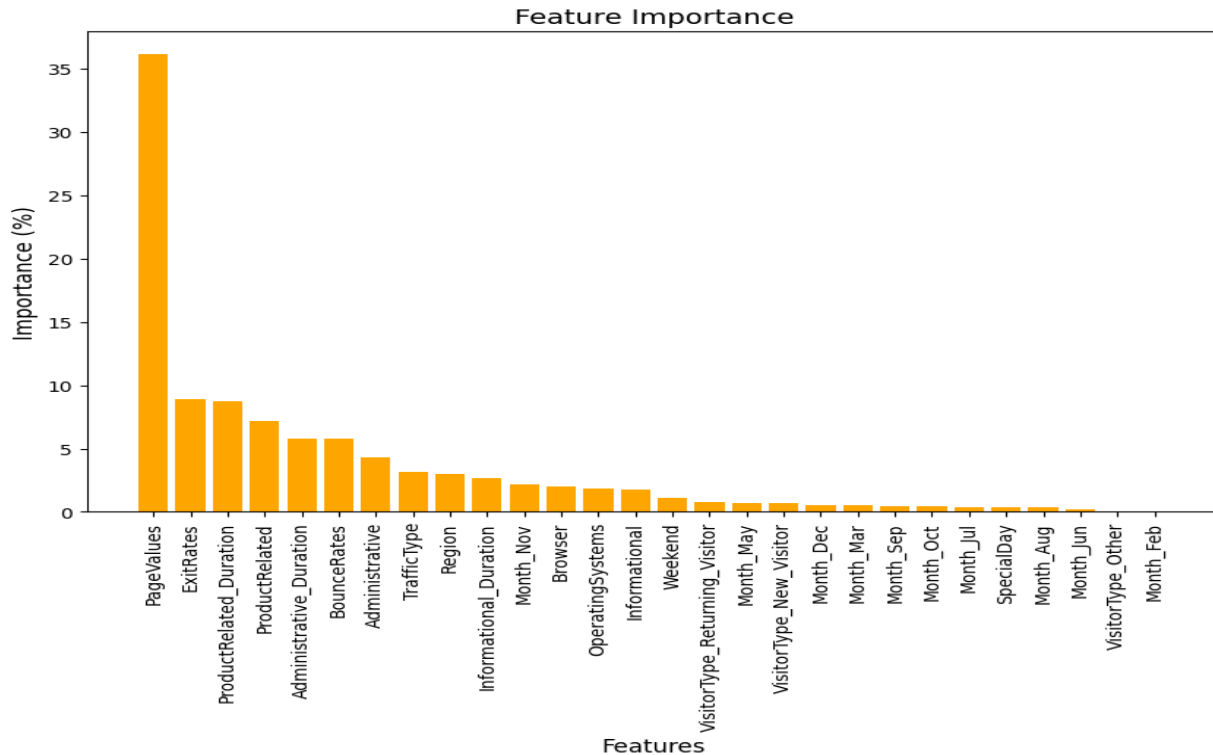
Findings:

All the below play a vital role in customers purchasing an item

1. No.of pages visited,
2. How quick someone leaves the page
3. Amount of time spent on a product

Insight:

1. Focus on the highly ranking features during development.

UI – prevent frequent exit rates and increase page values hence retention on the site.

Strengths and limitations

Strengths:

1. The model has a high accuracy in predicting when a customer is not going to purchase an item.

Limitations:

1. The model has a low accuracy in predicting when a customer is going to purchase an item. Though this can be improved upon.

Recommendations

1. Emphasis on in-app advertisement because returning visitors are the one that are most likely to make a purchase.

2. Timing marketing and promotions around high-sales months could drive sales.

3. Creating targeted campaigns and promotions around special days could lead to increased sales