DEVELOPING A PREDICTIVE MODEL FOR IDENTIFYING PURCHASE INTENT IN ONLINE USERS

OVERVIEW

Our goal is to enhance sales by predicting which online users are most likely to make a purchase during their session. By leveraging predictive modeling, we can identify potential buyers more effectively, allowing us to focus our marketing efforts on those who are most likely to convert.

BUSINESS UNDERSTANDING

In the highly competitive landscape of online retail, understanding and predicting user behavior is crucial for driving sales and enhancing customer engagement. The challenge lies in accurately identifying which users are likely to make a purchase during their web session. Our objective is to develop a predictive model that can identify purchase intent in real-time, enabling the business to target potential buyers more effectively, personalize user experiences, and ultimately increase conversion rates and revenue.

MODELLING

The goal of our model is to predict which users are likely to make a purchase during their online session. This helps us focus our marketing efforts where they matter most.

key factors

- User Behavior: The model looks at how users interact with the site, such as the number of product pages they visit and the time they spend on these pages.
- Timing: We also consider when users are visiting—weekends, for example, show a higher likelihood of purchase.

why classification

- Simple Grouping: We categorize users into two groups—those likely to purchase and those who aren't—so we can target the right audience.
- Business Benefit: By accurately identifying potential buyers, we can tailor our marketing efforts to increase conversion rates and improve overall sales.

Outcome

The model successfully distinguishes between likely buyers and other users, helping us to make informed decisions on where to invest our marketing resources.

EVALUATION

Accuracy - 74%

This means that out of all the predictions our model made, 74% were correct. In other words, when the model predicts whether a user is likely to make a purchase or not, it gets it right 74% of the time.

Recall - 65%

This means that out of all the customers who actually had purchase intent, our model was able to correctly predict about 65%.

Precision - 45%

Out of all the customers that our model predicted as having purchase intent, about 45% actually had purchase intent. This also suggests that a significant proportion of the identified leads may not be as valuable as hoped.

Summary

The predictive model successfully identifies potential buyers with a recall rate of 65%, capturing a significant portion of users likely to make a purchase. Although the precision is 45%, indicating that not all predicted buyers convert, the model still provides valuable insights for targeting marketing efforts.

RECOMMENDATIONS

1. **Focus on Targeting:** Utilize the model's high recall to better identify potential buyers. By reaching out to more prospects, we can potentially increase conversions and sales.
2. **Review and Optimize:** While precision is lower, it's not critical in this context. However, consider refining the model or exploring additional features to improve precision and enhance prediction reliability.
3. **Monitor Impact:** Regularly track how the predictions affect business outcomes. Assess whether the increased reach from higher recall translates to meaningful improvements in marketing effectiveness and sales performance.

NEXT STEPS

1. **Improve Predictions:** Explore ways to make our model more accurate in identifying potential buyers. This could involve trying new techniques or refining our approach to get better results.

2. **Test Effectiveness:** Run experiments to see how well the model works in real-world scenarios. This will help us understand if the model's predictions lead to more sales and whether any adjustments are needed.

3. **Track Results:** Set up a system to regularly review how the model is performing and how it affects our sales. Use this information to make informed decisions and continuously improve our marketing strategies.

THANK YOU

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