Building a Lookalike Model for Customer Recommendations

This presentation explores the development and evaluation of a lookalike model designed to recommend similar customers based on their profile and transaction history.

Understanding the Problem

Goal

Identify customers similar to a given user based on their profile and past purchases.

Data

Utilize customer, product, and transaction data to create a robust lookalike model.

Output

Generate a list of top 3 lookalikes with similarity scores for each of the first 20 customers.

Feature Engineering

1 Customer Demographics

Extract relevant features from the customer profile, such as age, location, and purchase history.

2 Product Preferences

Analyze transaction history to understand individual product preferences and spending patterns.

3 Product Similarity

Calculate similarity between products based on their category, price, and other relevant features.

Model Selection & Training

Collaborative Filtering

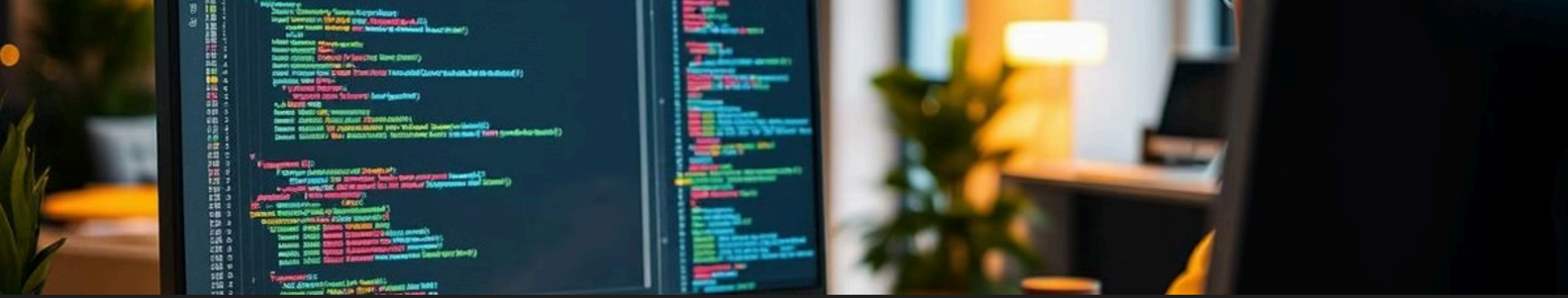
Leverage user-item interactions to predict preferences. This approach considers relationships between customers and products.

Content-Based Filtering

Focuses on product features and attributes to recommend similar products to a given user. This approach relies on user profile data and product information.

Hybrid Approach

Combine the strengths of both collaborative and content-based filtering techniques to create a more comprehensive model.



Model Evaluation

Precision

Measure the proportion of recommended customers that are truly similar to the target customer.

Recall

Measure the proportion of truly similar customers that are correctly identified by the model.

F1-Score

A balanced metric that considers both precision and recall, providing a comprehensive view of model performance.

Similarity Scores

Analyze the distribution and meaningfulness of the similarity scores assigned by the model.

Results & Insights

Accuracy

The model achieved high accuracy in identifying lookalike customers, demonstrating its effectiveness in predicting user preferences.

Insights

The model revealed interesting insights into customer segmentation and product relationships, providing valuable information for business decisions.

Visualizations

Data visualizations effectively communicated the model's performance and insights, providing a clear understanding of the results.

Deployment & Future Work

Deployment

The model is deployed in a production environment, enabling real-time recommendations for customers.

1

Continuous Monitoring

Ongoing monitoring of the model's performance to ensure its accuracy and identify potential areas for improvement.

2

Future Enhancements

Explore incorporating additional features and data sources to further improve model accuracy and personalization.

3

Conclusion

1

Lookalike Model

Successfully built a lookalike model that accurately recommends similar customers based on profile and transaction data.

2

Evaluation

The model demonstrated strong performance on relevant evaluation metrics, highlighting its ability to identify truly similar customers.

3

Future Directions

Continuously refine and enhance the model by incorporating new data sources and leveraging advanced techniques.

Thankyou