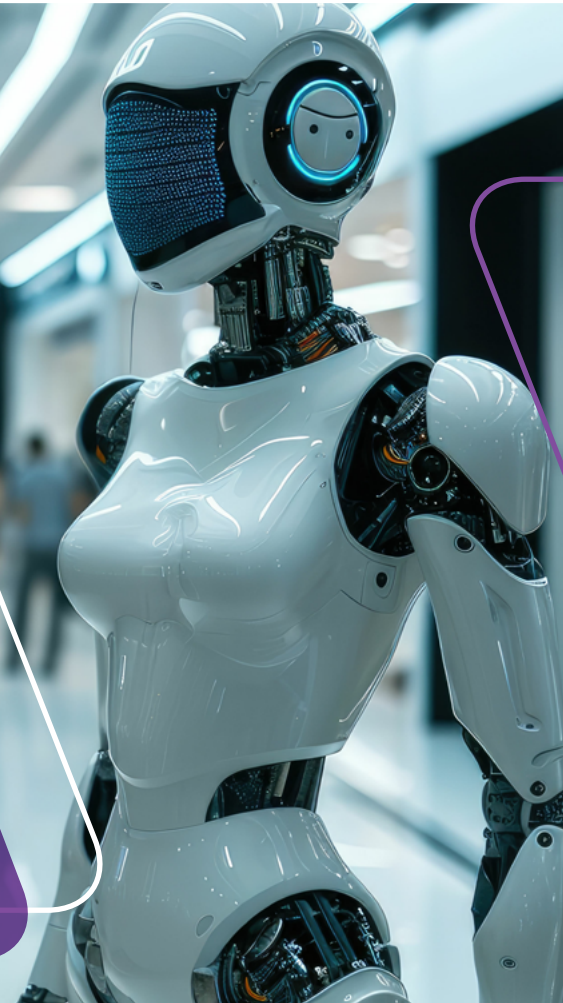


AI TRANSFORMATION TALES

Building a **Cross Sell** and **Upsell** Recommendation Engine



BACKGROUND

Our client is a prominent ecommerce platform for home supplies. They wanted to leverage available customer data to better understand customer behavior and attitudes to make product recommendations with AI and machine learning. They were intent to increase cross sell and upsell opportunities to boost their bottom line.

The challenges they faced included:

- Limited data with which to recommend similar brands
- Inadequate, inaccessible and uncleaned data
- The risk of cross selling the wrong product
- Difficulty in attracting customers
- Difficulty in maintaining user privacy
- An inability to generate targeted web traffic
- An inability to capture changes in user behavior



THE SOLUTION

After careful analysis of the client's challenges, Aspire's AI experts quickly got to work on their requirements. We had multiple consultations with them and documented the challenges that needed immediate attention. Aspire experts performed a detailed analysis of all the data on hand from various sources and charted a well-defined roadmap that addressed their specific needs.

Our experts

- Created a clustering mechanism to partition customers and items based on similar preferences
- Applied a nearest-neighbor algorithm to shrink the customer set
- Identified product association rules based on logistic regression
- Created predictive offers to anticipate spending habits and run hyper-personalized marketing campaigns



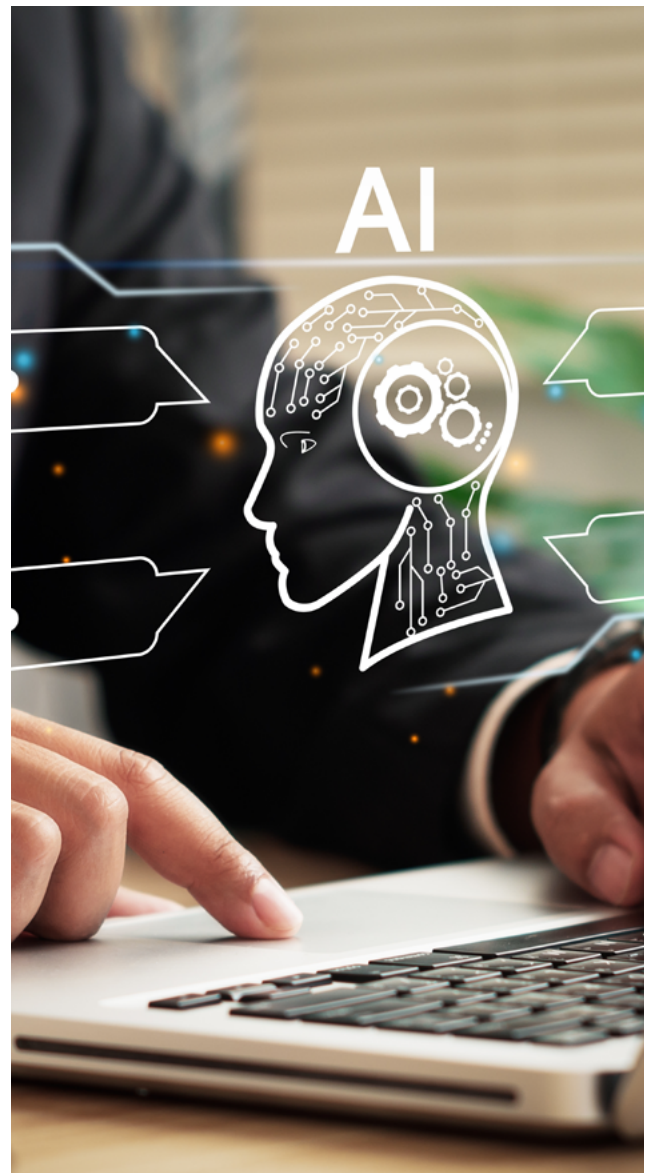
TECHNOLOGY SNAPSHOT

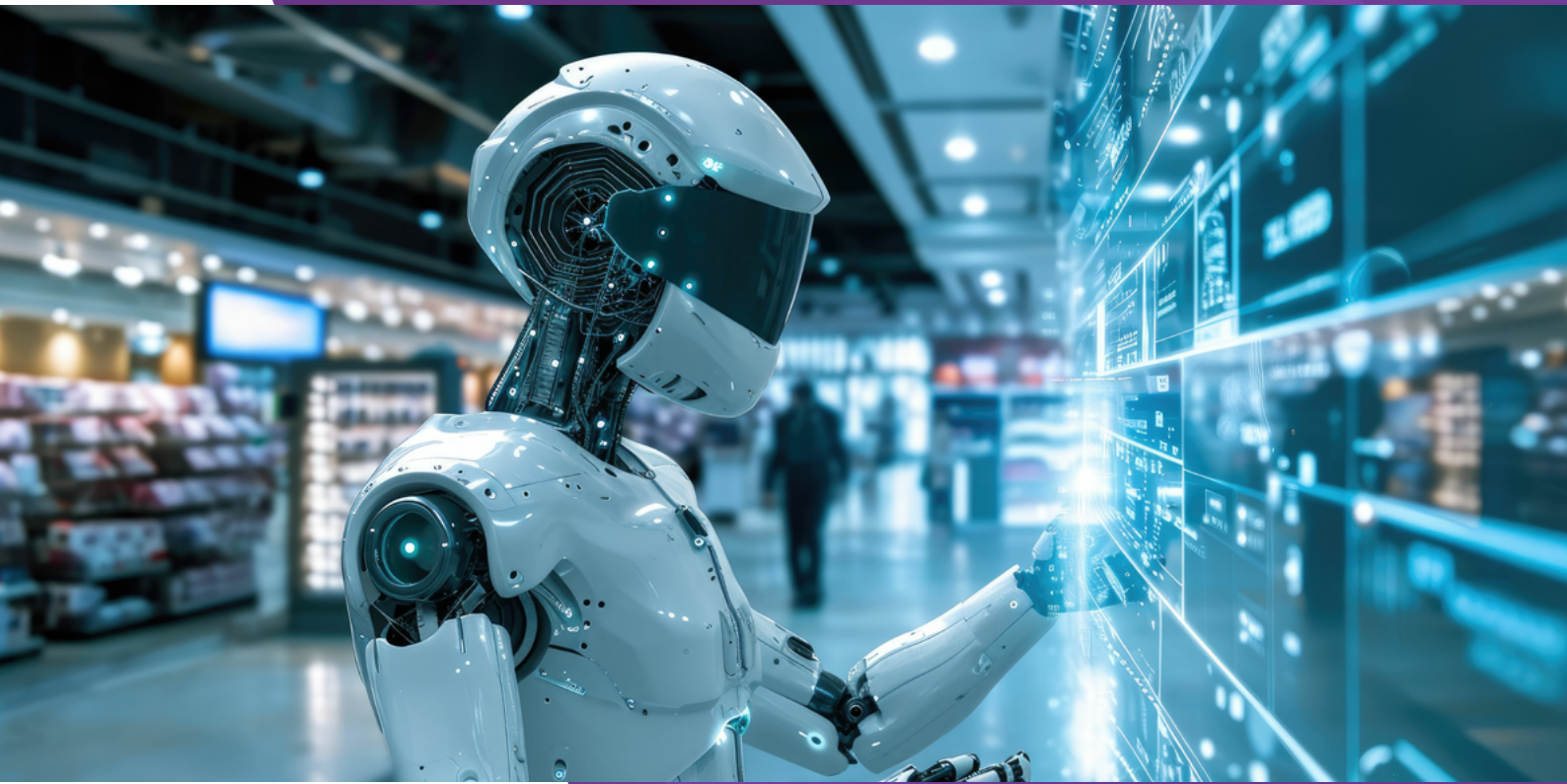
- Python – Numpy, Pandas, Scikit-learn, SciPy
- Collaborative filtering, association rules, and web mining for recommendations
- Cosine similarity to recommend relevant products/brands



BUSINESS BENEFITS

- The recommendation system helps customers easily find suitable products
- Improved cross selling with suggestions of additional products to purchase





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