

Business Persepective

A recommendation system is used to predict whether a customer will buy any specific product or not based on previous shopping history. We can use recommendations to bring any kind of business to another level. On top of strengthening relationships with your customers, the recommendation engines can provide higher returns to your business as they can help boost engagement opportunities with your products and offer a greater influx of cross-selling opportunities.

Netflix, YouTube, Tinder, and Amazon are all examples of recommender systems in use. The systems entice users with relevant suggestions based on the choices they make. Recommender systems can also enhance experiences for News Websites.

Some benefits of recommendation system:

- Engage Shoppers:

Shoppers become more engaged when personalized product recommendations are made to them across the customer journey. Through individualized product recs, customers can delve more deeply into your product line without having to dive into (and very likely get lost in) an e-commerce rabbit hole. Kibo Research shows that 52% of retailers are leveraging AI-driven personalization to deliver personalized product recommendations to their customers.

- Drive Traffic:

Through personalized email messages and targeted blasts, a recommendation engine can encourage elevated amounts of traffic to your site, thus increasing the opportunity to scoop up more data to further enrich a customer profile.

- Increase Average Order Value:

Average order values typically go up when an engine is leveraged to display personalized options as shoppers are more willing to spend generously on items they thoroughly covet.

- Increase the Number of Items per Order:

In addition to the average order value rising, the number of items per order also typically rises when an engine is employed. When the customer is shown options that meet their interest, they are far more likely to add items to their active purchase cart.

- Convert Shoppers to Customers:

Converting shoppers into customers takes a special touch. Personalized interactions from a recommendation engine show your customer that he or she is valued as an individual, in turn, engendering long-term loyalty.

- A Recommendation Engine Provides Reports:

Detailed reports are an integral part of a personalization system. Accurate and up-to-the-minute reporting will allow you to make informed decisions about the direction of a campaign or the structure of a product page.

- Offer Advice and Direction

An experienced recommendation provider like Kibo can offer advice on how to use the data collected from your recommendation engine. Acting as a partner and a consultant, the provider should have the industry know-how needed to help guide you and your eCommerce site to a prosperous future.

Google Recommendation System:

When you use Google Shopping, you're browsing products from advertisers and sellers who have chosen to feature their products on Google Shopping. Unless otherwise indicated, offers on Google Shopping are ranked based on relevance, including your search terms and other Google activity.

Netflix Recommendation System:

Netflix uses machine learning, a subset of artificial intelligence, to help their algorithms “learn” without human assistance. Machine learning gives the platform the ability to automate millions of decisions based on user activities. Netflix takes feedback from every visit to the website service and continually re-trains our algorithms with those signals to improve the accuracy of their prediction of what we're most likely to watch.

Roles and Responsibilities:

Today in the Modern world many companies are using recommendation engines to recommend movies, music, television programs, books, documents, websites, conferences, tourism scenic spots, and learning materials, and involve the areas of e-commerce, e-learning, e-library, e-government, and e-business services.

How to Boost the sales?

One powerful way to boost your sales, customer satisfaction, and customer loyalty is to use a recommender system. Such a system enables you to draw up user profiles based on their behavior and to predict which products are most relevant to such profiles. A user profile specifies the properties of how much interest a customer has in a particular product. The Product recommendation system is used to recommend popular products to potential customers.

Recommender systems are not new. In 2006, Netflix started a one million dollar competition to improve its recommendation algorithms. In 2019, 75% of their viewed content is attributed to personalized recommendations.

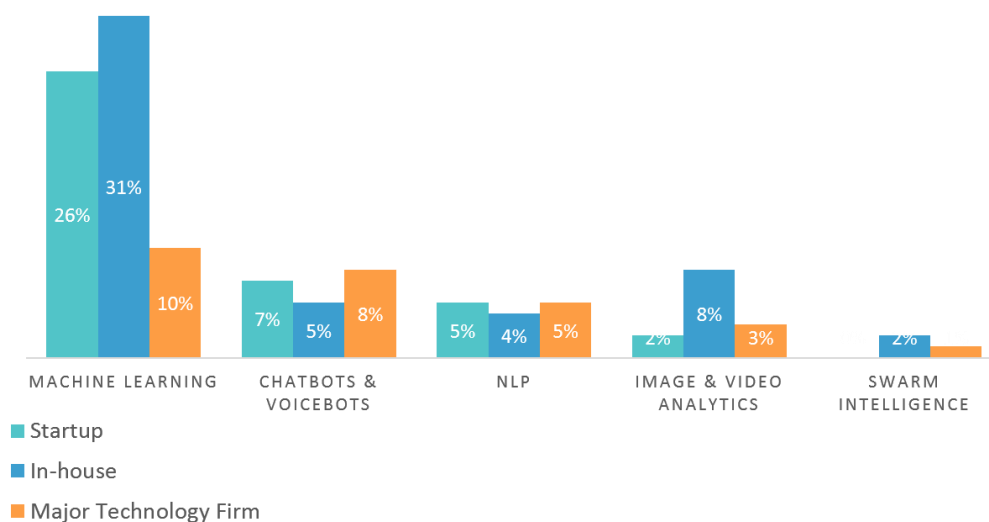
How it works

The basic settings for recommendation services are similar to those for search services. Similar to search services, the primary purpose of a recommender system is to provide a customer with a ranked list of recommended items.

- The vast majority of recommendation methods assume that customer ratings are available for catalog items. The ratings can be explicitly provided by customers or derived from behavioral data, such as purchases and online browsing histories.
- Certain recommendation methods rely on content and catalog data to calculate similarities between the items based on their attributes.
- Some recommender systems can take advantage of additional user data, such as online order histories or store transactions.
- Both recommendation requests and customer ratings can be complemented with contextual information, such as time, location, or marketing channel. A recommender system can use contextual data to improve the relevance of recommendations.

Many businesses take up artificial intelligence (AI) technology to try to reduce operational costs, increase efficiency, grow revenue, and improve customer experience. For the greatest benefits, businesses should look at putting the full range of smart technologies - including machine learning, natural language processing, and more - into their processes and products. However, even businesses that are new to AI can reap major

Artificial Intelligence (AI) Use-case Distribution in Retail Organizations, in %, by Operating Model, Global, 2018



Source: Capgemini SE



References:

- 1) <https://scholar.harvard.edu/files/sendhil/files/recommenders55.pdf>
- 2) <https://ui.adsabs.harvard.edu/abs/2020arXiv201003240C/abstract>
- 3) <https://ui.adsabs.harvard.edu/abs/2020arXiv201003240C/abstract>