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Personalization algorithms observe your digital habits and then utilize AI to make recommendations.

Personalization algorithms are sets of code that observe your digital habits and predict your next choices.

Companies are investing heavily to improve their personalization algorithms every day. In this article, we dive into the details of personalization algorithms and how their use affects all internet users.

How Algorithms Personalize Your Online Experience

You may notice that when you order a frying pan online images of spatulas and spoons follow you around. Ever noticed how Google keeps reminding you of the ETA to reach home at the right time, everyday? These seemingly coincidental experiences are actually intentional suggestions designed to persuade your habits.

From data mining to data crunching, every phase is processed through a complex set of code. This code or algorithm, monitors digital activities and builds up your personality model to serve you with a customized experience. You then receive messages, advertisements, and promotions based on your activity.

How Personalization Algorithms Work

Personalization algorithms utilize artificial intelligence (AI) to track and analyze behavioral data from users on the internet. The basis for these recommender systems focus on the following activities:

1. Your typical internet searches
2. The number of times you visit a website
3. How long you spend on a website
4. What and how often you make a purchase

As the algorithm is collecting data it will process relevant information through constant match-making and habit analysis. Then, the data is sold to advertisers and used to create personalized content.

The Purpose of Algorithmic Recommendations

The purpose is to create a personalized online experience based on user interests.

By utilizing personalization algorithms marketers can build segments based around user activity and narrowly target them for more efficient ROIs (Return on Investments).

The 2 reasons why companies rely on algorithmic recommendations is to improve retention and conversion.

1. Improved customer retention

A personalized experience helps nearly [44% of new customers](#) convert into repeat buyers. And just a [5% increase in customer retention](#) can exponentially grow profits anywhere between 25% to 95%.

2. Improved conversion rates

Algorithmic recommendations ensure that when someone sees a social media ad for dog food, they have a dog. The chance of someone buying dog food when they only have a cat is unlikely. This ensures the right products are being shown to the right people.

Pros and Cons of Personalization Algorithms for Consumers

Algorithms can be helpful at showing you content you enjoy. However, they can include bias in their structure, place privacy at risk, and show you content that you do not enjoy.

Pros of Personalization Algorithms

Data Ethics

Data Ethics defines the moral code of how data can be stored, processed, and managed by any business. Amazingly, the core of data ethics supports the utilization of personalization algorithms for the good at large.

User Privacy

As a matter of principle, user privacy is and should be respected. Proper data collection is dumped in a disfigured raw form. This protects users' personal information from getting in the wrong hands.

Data Consent

Consent is always a prerequisite. Deployment of personalization algorithms without the knowledge of the user is a criminal practice. Moreover, the consent should be clear-cut, concise, and not loquacious. The font, placement, and time must also be conspicuous and well-placed.

Cons of Personalization Algorithms

Lack of Data Laws

In the United States, there is no comprehensive data privacy federal law in place. A complex patchwork of medium and sector-specific laws is used on a make-shift basis. Most of the data laws in the US revolve around data protection and usage rights.

The Advantages and Disadvantages of Personalization Algorithms

Advantages of Personalization Algorithms

For businesses:

1. Higher revenue.
2. Enhanced customer engagement.
3. Predictive digital behavior.
4. Ability to build sales personality models.

For You:

1. Relevant content suggestions.
2. Product recommendations.
3. Appropriate targeted ads.
4. Customized responses.

Disadvantages of Personalization Algorithms

For businesses:

1. Costly data acquisition needed for A/B testing.
2. Difficulty in balancing profits with privacy concerns.
3. Audience irritation by pushing outdated relevant ads
4. Resentment by digital rights activists.
5. Risk of violating data laws such as General Data Protection Regulations (GDPR).

For You:

1. Sense of being observed.
2. Risk of data used by other businesses without your consent.

Types of Personalization Algorithms

Personalization algorithms are varying in dimensions and strategies. It depends on the data scientists to adopt a modus operandi that works best for them. While there are many, primarily we will only be touching on the three most relevant ones, segmentation-based, 1 to 1, and product recommendations.

Segmentation Based Algorithms

Refers to the method of grouping users based on geolocation, demographics, and other notable characteristics. Segmentation is an age-old technique that still has some relevance. It is similar to the targeting settings advertisers set in Facebook and Google to target users based on their location, age, and demographics. This method has shown good results for the Big Tech.

1 to 1 Algorithms

Refers to the practice of rolling out an exclusive experience for each customer taking leverage right throughout their buyer journey. For referrals, recurring sales, and client retention; it is important to emphasize 1-to-1 personalization algorithms.

Product recommendation algorithms

Display products based on customer data metrics such as style, size, color, or gender. Brands are now able to offer focused, and highly relevant suggested products to their customers. An example given earlier is that of Amazon, which uses a combination of machine learning to predict the best recommended products.

Examples of Predictive Personalization

[Netflix uses a recommendation algorithm](#) with over 210 million global users, can't provide its users with the same homepage and generate an individualized experience, maintaining a [74% retention rate](#). Every time you log into Netflix, the system optimizes your homepage to recommend you titles based on your latest watch history.

Amazon does the same. As the world's e-commerce store, you will always get personalized product recommendations based on your search history and predictive behavior.

Future of Personalization Algorithms

There is no doubt that given their current level, personalization algorithms are only going to get better. AI is coming up with predictive shopping algorithms that can even deliver gifts on your behalf, without your action.

Personalization algorithms will keep dominating in the coming future. They will continue to learn more about you to deliver more accurate and personalized experiences.

Take Back Control of Your Algorithm

Invisibly is one of the first tech companies to compensate users for helping us create their personalized algorithms. Rewarding users for sharing their data is one of the core propositions of our company, which makes us truly unique, and unlike Big Tech.