**Machine learning has been around for a while. And now, in the age of big data, it has been given a lot of attention. but why? Simply put, organizations need help locating and making use of the massive amounts of data that systems are constantly generating. Businesses can develop automated models that quickly process large amounts of data and, thanks to machine learning technology , "learn" how to use them to solve problems. Let's see why everyone loves machine learning .**

**Different applications of machine learning**

**Machine learning includes a wide and diverse range of applications and applications, and we are in contact with them every day :**

**to recommend**

**Machine learning algorithms are used in popular video and music streaming services to generate recommendations. By analyzing the songs you listen to and the movies you watch, these algorithms identify the type of content you're interested in and recommend movies or songs you might be interested in, with information about them. they do .**

**Prevention of fraud**

**Financial institutions can use machine learning models to identify transactions that contradict predefined criteria, such as purchase volume and user location. And in case of fraud, they will inform you about it .**

**Search engine results**

**Every time you enter a search term in Google, machine learning algorithms examine your actions and change the distribution of results in the future. For example, if you spend a lot of time on a website, it is possible that in future searches that the word you are looking for is similar or close to the keywords of the pages of that site, that site will be on the first page of results or have a favorable ranking .**

**Chatbots**

**When you work with an AI-powered assistant to solve your online problems, a trained machine learning model works behind the scenes and automatically provides the correct answer based on your input .**

**Spam filters**

**To help protect your inbox from spam, machine learning algorithms use neural networks to analyze features in subject lines , body text, and return addresses .**

**Use in artificial intelligence**

**Machine learning, as a sub-branch of artificial intelligence, allows computers to learn from previous information. A computer system can use data from the past to predict the future. You can also make decisions without careful planning thanks to machine learning .**

**Customer identification and understanding**

**use machine learning models to identify customers who are willing to take their business elsewhere . Your credit card provider may be trying to increase their customer retention rate with the help of a machine learning-based platform. Don't be surprised if you stop using your credit card and suddenly get an amazing offer emailed to you from its provider .**

**Sentiment analysis**

**is also known as Opinion Mining or Emotion AI . This technique of machine learning and** [**natural language processing (NLP)**](https://imhmdi.com/%da%86%da%af%d9%88%d9%86%d9%87-%d8%af%d8%b1-%d9%be%d8%b1%d9%88%da%98%d9%87%d9%87%d8%a7%db%8c-nlp-%d8%af%d8%a7%d8%af%d9%87-%d8%a7%d9%81%d8%b2%d8%a7%db%8c%db%8c-%da%a9%d9%86%db%8c%d9%85/)**They are used to identify important sentiments in social media posts. Therefore, their application is to understand how consumers feel about the brand or product they are using .**

**Real estate appraisal**

**Machine learning algorithms estimate a property's current value for websites such as Zillow and Redfin by examining available information about the property's features and the sale or rental price of similar properties in the area .**

**learning programs**

**To determine the appropriate pace and duration for a training course, educational tools such as the language learning platform Duolingo analyze user data .**

**Medical image processing**

**For healthcare organizations, radiology platforms with machine learning capabilities are used. These platforms can be trained to identify and flag potential problems in patient X-ray images. Machine learning in this field needs more precision and attention .**

**Advantages of Machine learning that you may not know**

**The many applications of machine learning show how useful the technology is for all kinds of businesses. The presence of the word business in the previous sentence indicates the benefits and improvements that machine learning brings to businesses .**

**Personalization of customer interaction**

**Another important tactic to compete in today's market is personalization. Machine learning platforms track user behavior and recommend other products based on previous purchases. Online stores can interact more with customers and increase their sales. One of the best companies that uses machine learning to recommend products to customers and send them notifications is the global giant Amazon .**

**To increase efficiency**

**Businesses can use machine learning to speed up repetitive tasks and direct human resources to more valuable activities. For example, using machine learning technology to search entire documents can save time compared to manually scanning and cross-referencing documents. Companies can reduce the cost of data recovery tasks related to laws and regulations by using this feature. Due to saving time, people can spend their time on other things .**

**Personalization of customer interaction ( 2 )**

**Thanks to machine learning , decisions can be made faster than ever. For example, a trained software based on machine learning can automatically identify security anomalies in an environment and alert the team responsible for its handling .**

**These platforms help businesses protect their customer data and brand reputation. Also, by quickly deciding on practical solutions, the need for expensive corrective measures is avoided .**

**Accurate demand forecasting**

**Businesses are under increasing pressure to anticipate market trends and consumer behavior to compete in a rapidly changing business environment. Therefore, by incorporating machine learning models into their data analytics, businesses can more accurately and effectively predict market demand. This improves inventory management and saves costs .**

**final word**

**By using machine learning , the user can deliver a computer algorithm with a large amount of data to the computer. Then, after analyzing them, the computer makes its recommendations and decisions based on the data it has received .**

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