

Explain the machine learning concept by taking an example. Describe the perspective and issues in machine learning.

Ans. [REDACTED]

Machine learning is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behavior.

Artificial intelligence systems are used to perform complex tasks in a way that is similar to how humans solve problems.

Example

Google Translate was possible because it “trained” on the vast amount of information on the web, in different languages.

Perspectives

- Machine learning is a subfield of artificial intelligence and machine learning algorithms are used in other related fields like natural language processing and computer vision.
- In general, there are three types of learning and these are supervised learning, unsupervised learning, and reinforcement learning.
- Their names tell the main idea behind them actually.
- In supervised learning, your system learns under the supervision of the data outputs so supervised algorithms are preferred if your dataset contains output information.

Issues

Lack of quality of data

- One of the main issues in Machine Learning is the absence of good data.

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- While, algorithms tend to make developers exhaust most of their time on artificial intelligence.

Fault in credit card fraud detection

- Although this AI-driven software helps to successfully detect credit card fraud, there are issues in Machine Learning that make the process redundant.

Getting bad recommendations

- Proposal engines are quite regular today.
- While some might be dependable, others may not appear to provide the necessary results.

Talent deficit

- Albeit numerous individuals are pulled into the ML business, however, there are still not many experts who can take complete control of this innovation.

Making the wrong assumptions

- ML models can't manage datasets containing missing data points.
- Thus, highlights that contain a huge part of missing data should be erased.

References/Sources:

- <https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained>

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