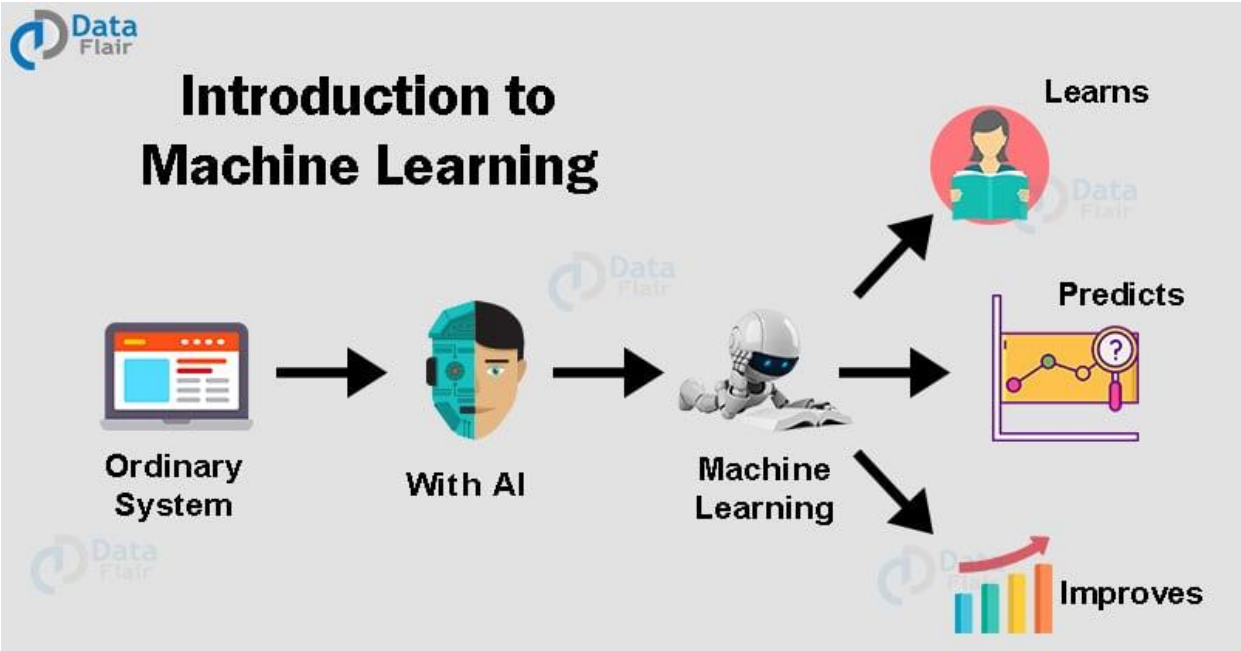
WHAT IS MACHINE LEARNING

At a broad level, Artificial Intelligence (AI) refers to the use of computers or machines to imitate human-like problem-solving and decision-making abilities. Machine Learning, a subset of AI, primarily deals with developing algorithms that enable machines to learn from data and make predictions or decisions based on that knowledge. In essence, machine learning algorithms use statistical methods to identify patterns and extract insights from data, which are then utilized to forecast outcomes or automate decision-making processes.



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Machine learning is being employed across a diverse range of applications today. One of the most recognizable instances of machine learning at work is Facebook's recommendation engine, which powers the site's news feed. Through machine learning algorithms, Facebook is able to tailor each user's news feed to their individual preferences. If a user frequently engages with content from a particular group, the recommendation engine will give that group's posts more prominence in the user's feed. The engine achieves this by analyzing the user's past behavior patterns and attempting to reinforce them. However, should the user's behavior change, and they stop engaging with content from that group, the news feed will automatically adjust to reflect their new interests. All of this is done behind the scenes using machine learning algorithms that continue to learn and adapt based on the user's behavior.

OTHER APPLICATIONS OF MACHINE LEARNING INCLUDE:

Self-driving cars – Machine learning algorithms have the potential to enable semi-autonomous vehicles to detect and alert the driver of partially visible objects, thereby contributing to the development of self-driving cars.

Fraud detection – Machine learning algorithms are used to identify fraudulent transactions or activities, for example, by analyzing patterns in financial data.

Healthcare – Machine learning algorithms are used to analyze medical data, such as patient records and medical images, to assist in diagnosis, treatment, and drug discovery.

Gaming – Machine learning algorithms are used to develop more intelligent and responsive opponents in video games.

Predictive maintenance – Machine learning algorithms are used to predict when equipment or machinery may require maintenance or repair, reducing downtime and costs.

References:

[1] Burns, Ed. "What Is Machine Learning and Why Is It Important?" Enterprise AI, TechTarget, 30 Mar. 2021, <https://www.techtarget.com/searchenterpriseai/definition/machine-learning-ML#:~:text=Machine%20learning%20is%20important%20because,central%20part%20of%20their%20operations.>

[2] Team, DataFlair. "Machine Learning Tutorial – All the Essential Concepts in Single Tutorial." *DataFlair*, 27 June 2021, <https://data-flair.training/blogs/machine-learning-tutorial/.>