



Post-Read

Introduction to Machine learning

International School of AI & Data Science

Machine Learning in Real World

Machine learning is one of the **major subfields of AI**, and one where there is currently a lot of progress in developing new and better solutions. Without going into the technical details, we can say that machine learning is essentially all about extracting valuable information from data. Data, in this context, could be anything from text, video, images, sound, sensor data, etc. Machine learning is often more accurate, automated, fast, customizable, and scalable than manually constructed **rule-based systems**.



Machine learning algorithms can reinforce the field information and automated function mostly related to regulation and optimization. Moreover, [machine learning](#) and computer vision have augmented many domains concerning medical diagnostic, statistical algorithms, scientific research, etc. The extended data today is prevailing over multiple systems, and obtaining valuable knowledge from data has appeared as the latest model of scientific inquiry.

Application of Machine Learning

A few of the applications where machine learning is used are given below:

Education: Computers can determine individual **study plans** specific to each student's needs. Algorithms test results, drastically reducing the time teachers spend in their leisure time on grading. A student's attendance and academic history can help determine gaps in knowledge and learning disabilities.



These applications will not necessarily translate to a **teacher-less classroom** but facilitate the teaching and learning environments to enhance the outcomes and ease the burden on both teacher and student. We have developed whip-smart classrooms to expand the database of resources.

Health: Machine learning is taking a big part in our health and well-being daily, and it is in utilization for **faster patient diagnosis**. Even the prevention of illness in the first place is aided by predicting the potential health problems one may be susceptible to age, socioeconomic status, genetic history, etc.



The use of programs to analyze and **cross-reference symptoms** against databases containing millions of other cases and illnesses has led to faster diagnoses of illness and disease. In this way, we are saving lives through quicker treatment and decreasing the diagnosing time of a patient.

Transport: As we are diving into the age of AI, we expect that our **shipping and rail network** will become **autonomous** in control. China is currently testing driverless public buses. While Google's **self-driving car** replaces one driver, the autonomous ship's AI will need to carry out the tasks usually requiring a crew of 20.



Home: Amazon's, Echo, and Alexa allow for the voice-activated control of your smart home (the dimming of lights, closing of blinds, locking of doors, etc., all at your command). Our daily life at home can become very easy with automatically working ACs, refrigerators, washing machines, and any switch-operated device. We can be at work and still see inside your fridge to know what food we are running low on. We do not even necessarily need to go to the shop to restock.



Finance: In Finance, AI is being used to replace human decision-making in investments. Forbes points to so-called “quant” hedge funds like **Renaissance Technologies** for being the most successful at applying the new statistical learning techniques in capital location.



The Next Five Years of Smart Machines

While much progress has occurred in applying artificial intelligence to the real world, more is to come. Technologists armed with perceptive algorithms and subject-matter experts are combining to create innovative solutions in every field imaginable. Everything from farming to pharmaceuticals and cybersecurity is fair game. In the next five years, expect to see even more machine learning and AI in action to change the way you live and get everything done.

Further References

To get more details about machine learning you can refer to the following references:

- [What is machine learning?](#)
- [The latest in Machine Learning](#)
- [Introduction to Machine Learning](#)
- [Machine Learning use cases in different industries](#)
- [Popular Machine Learning Applications and Use Cases in our Daily Life](#)