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# Introduction

This contribution provides input to the section 6.1 an overview of AI/ML.

### -----------------------Start of change 1-------------------------------------------

## 6.1 Overview of AI/ML

*Editor’s Note: The section introduces the basic concept of AI/ML technologies.*

Artificial Intelligence (AI) is the ability of a computer program to learn and think. Everything can be considered Artificial intelligence if it involves a program performing functions that the intelligence of a human can do.

AI is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from experience.

On the other hand, Machine learning (ML) is a type of AI that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so. ML algorithms use historical data as input to predict new output values.

**Advantages of using AI/ML**

The advantages of AI applications are enormous and can revolutionize any professional sector. Below are a few of those:

* AI/ML drives down the time taken to perform a task. It enables multi-tasking and eases the workload for existing resources.
* AI/ML enables the execution of previously complex tasks without high cost outlays.
* AI/ML operates 24x7 without interruption or breaks and has no downtime.
* AI/ML augments the capabilities of differently-abled individuals.
* AI/ML has mass-market potential as it can be deployed across industries.
* AI/ML facilitates decision-making by making the process faster and smarter.

**Applied areas**

AI/ML is used in various fields of technology that require automation and intelligence. Its fields of application are various such as Natural Language Generation, Speech Recognition, Machine Learning Platforms, Virtual Agents, Decision Management, AI Optimized Hardware, Deep Learning Platforms, Robotic Process Automation.

**Importance of AI/ML**

AI/ML technology is crucial because it enables human capabilities – understanding, reasoning, planning, communication, and perception – to be undertaken by software increasingly effectively, efficiently, and at low cost.

*Artificial intelligence can enhance things as simple as household appliances to medical neural networks that can diagnose diseases or perform operations. As society changes and embraces a more automated lifestyle, new jobs will be created to monitor, enhance, and repair these automated machines.*

**Data and AI/ML**

ML is the link that connects Data Science and AI. That is because it is the process of learning from data over time. AI is the tool that helps an intelligent service gets results and solutions for specific problems. On the other hand, machine learning is what helps in achieving that goal using data.

**IoT and AI/ML**

AI-enabled IoT creates intelligent machines that simulate smart behaviour and supports decision making with little or no human interference. While IoT deals with managing devices and collecting data, AI/ML enables IoT to provide intelligent services using the collected data.

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