

**Submitted by: Ram Krishna Subedi ( 077BCT037 )**

## **Defination of AI:**

In simple words, Artificial Intelligence (AI) refers to the development of intelligent machines that can perform tasks that usually require human intelligence. AI examples include virtual assistants like Siri, recommendation systems on platforms like Netflix, self-driving cars, healthcare applications like medical imaging analysis, and AI-powered gaming.

## **How does AI technology work?**

AI systems employ algorithms, software codes, and statistical frameworks to empower machines in gathering data, analyzing information, identifying patterns, and rendering decisions, thereby perpetually refining, advancing, and adapting to achieve superior results.

Artificial Intelligence (AI) operates through complex algorithms and computational processes that mimic human cognitive functions, enabling machines to perform tasks that typically require human intelligence. These algorithms analyze vast amounts of data, identify patterns, and make predictions or decisions based on learned knowledge. Training algorithms within the realm of Artificial Intelligence, a subset being Machine Learning, entails enhancing their capabilities over time through exposure to extensive datasets, thus refining their performance without the need for direct programming instructions. Additionally, AI systems utilize techniques such as natural language processing, computer vision, and neural networks to interpret and understand information from various sources. Through continuous iteration and optimization, AI systems evolve and adapt to new challenges, demonstrating remarkable capabilities in problem-solving, decision-making, and automation across diverse domains.

## **Importance of Artificial Intelligence**

The significance of Artificial Intelligence (AI) cannot be overstated in today's world, as it holds immense potential to revolutionize industries, enhance efficiency, and improve quality of life. AI technologies enable automation of tasks that were once time-consuming or impossible for humans to accomplish, leading to increased productivity and cost savings across various sectors. AI advancements facilitate the streamlining of tasks that were previously labor-intensive or beyond human capacity, resulting in heightened efficiency and financial benefits spanning multiple industries.