## **Goals of Artificial Intelligence**

AI is primarily achieved by reverse-engineering human capabilities and traits and applying them to machines. At its core, AI reads human behaviour to develop intelligent machines. Simply put, the foundational goal of AI is to design a technology that enables computer systems to work intelligently yet independently. The essential goals of AI are explained below.

**s1. Develop problem-solving ability**

AI research is focused on developing efficient problem-solving algorithms that can make logical deductions and simulate human reasoning while solving complex puzzles. AI systems offer methods to deal with uncertain situations or handle the incomplete information conundrum by employing probability theory, such as a stock market prediction system.

The problem-solving ability of AI makes our lives easier as complex tasks can be assigned to reliable AI systems that can aid in simplifying critical jobs.

### 2. Incorporate knowledge representation

AI research revolves around the idea of knowledge representation and knowledge engineering. It relates to the representation of ‘what is known’ to machines with the ontology for a set of objects, relations, and concepts.

The representation reveals real-world information that a computer uses to solve complex real-life problems, such as diagnosing a medical ailment or interacting with humans in natural language. Researchers can use the represented information to expand the AI knowledge base and fine-tune and optimize their AI models to meet the desired goals.

### 3. Facilitate planning

Intelligent agents provide a way to envision the future. AI-driven planning determines a procedural course of action for a system to achieve its goals and optimizes overall performance through predictive analytics, data analysis, forecasting, and optimization models.

With the help of AI, we can make future predictions and ascertain the consequences of our actions. Planning is relevant across robotics, autonomous systems, cognitive assistants, and cybersecurity.

### 4. Allow continuous learning

Learning is fundamental to AI solutions. Conceptually, learning implies the ability of computer algorithms to improve the knowledge of an AI program through observations and past experiences. Technically, AI programs process a collection of input-output pairs for a defined function and use the results to predict outcomes for new inputs.

AI primarily uses two learning models–supervised and unsupervised–where the main distinction lies in using labeled datasets. As AI systems learn independently, they require minimal or no human intervention. For example, ML defines an automated learning process.

### 5. Encourage social Intelligence

Affective computing, also called ’emotion AI,’ is the branch of AI that recognizes, interprets, and simulates human experiences, feelings, and emotions. With affective computing, computers can read facial expressions, body language, and voice tones to allow AI systems to interact and socialize at the human level. Thus, research efforts are inclined toward amplifying the social intelligence of machines.

### 6. Promote creativity

AI promotes creativity and artificial thinking that can help humans accomplish tasks better. AI can churn through vast volumes of data, consider options and alternatives, and develop creative paths or opportunities for us to progress.

It also offers a platform to augment and strengthen creativity, as AI can develop many novel ideas and concepts that can inspire and boost the overall creative process. For example, an AI system can provide multiple interior design options for a 3D-rendered apartment layout

### 7. Achieve general intelligence

AI researchers aim to develop machines with[general AI](https://www.spiceworks.com/tech/artificial-intelligence/articles/what-is-general-ai/) capabilities that combine all the cognitive skills of humans and perform tasks with better proficiency than us. This can boost overall productivity as tasks would be performed with greater efficiency and free humans from risky tasks such as defusing bombs.

### 8. Promote synergy between humans and AI

One of the critical goals of AI is to develop a synergy between AI and humans to enable them to work together and enhance each other’s capabilities rather than depend on just one system.