Artificial Intelligence, often abbreviated as AI, refers to the simulation of human intelligence in machines that are programmed to think and mimic human actions. These machines are designed to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation.

At its core, AI enables computers to learn from experience, adjust to new inputs, and perform tasks autonomously, without explicit programming. This is achieved through various techniques, including machine learning, deep learning, natural language processing, and computer vision.

Machine learning, a subset of AI, allows systems to learn from data and improve their performance over time without being explicitly programmed. Deep learning, a more advanced form of machine learning, involves artificial neural networks inspired by the structure and function of the human brain. These networks can analyze large amounts of data to recognize patterns and make predictions.

Natural language processing (NLP) enables computers to understand, interpret, and generate human language. This capability allows AI systems to interact with users in a more natural and conversational manner, powering applications like virtual assistants, chatbots, and language translation tools.

Computer vision empowers machines to interpret and understand the visual world, enabling tasks such as facial recognition, object detection, and image classification. Combined with other AI techniques, computer vision enables applications ranging from autonomous vehicles to medical image analysis.

In summary, AI encompasses a broad range of technologies and methodologies aimed at creating intelligent machines capable of performing tasks that traditionally require human intelligence. As AI continues to advance, its impact on various industries and aspects of everyday life is profound, shaping the future of technology and society.