

# Artificial Intelligence Overview

## 1 Overview

Artificial Intelligence (AI) involves the development of systems that can perform tasks requiring human intelligence, such as learning, reasoning, and problem-solving. AI spans various subfields, including machine learning, natural language processing, and computer vision, transforming industries by enabling automation and data-driven decision-making.

## 2 Key Aspects

- **Machine Learning:** Algorithms that learn from data to make predictions or decisions.
- **Natural Language Processing:** Enabling machines to understand and generate human language.
- **Computer Vision:** Allowing systems to interpret and analyze visual data.
- **Ethics and Fairness:** Addressing biases and ensuring responsible AI deployment.

## 3 Benefits

- Enhances efficiency through automation of repetitive tasks.
- Improves decision-making with data-driven insights.
- Enables personalized experiences in services like healthcare and retail.

## 4 Applications

AI powers autonomous vehicles, virtual assistants, predictive analytics, and personalized recommendations, impacting sectors like healthcare, finance, and transportation.