

## **Introduction**

Machine learning is a subset of artificial intelligence. It allows systems to learn from data. Machine learning is important for modern applications.

## **Applications of Machine Learning**

Applications include fraud detection, recommendation systems, and natural language processing. Image classification is another common task.

**Machine** learning powers most modern recommendation engines.

## **Challenges in Machine Learning**

Overfitting, data bias, and lack of interpretability are common challenges.

**Machine** learning also suffers from ethical issues and data quality problems.

## **Future Scope**

The future of **machine** learning includes better interpretability, unsupervised learning, and AI safety. **Natural** language models and **image** generation models will continue to evolve.