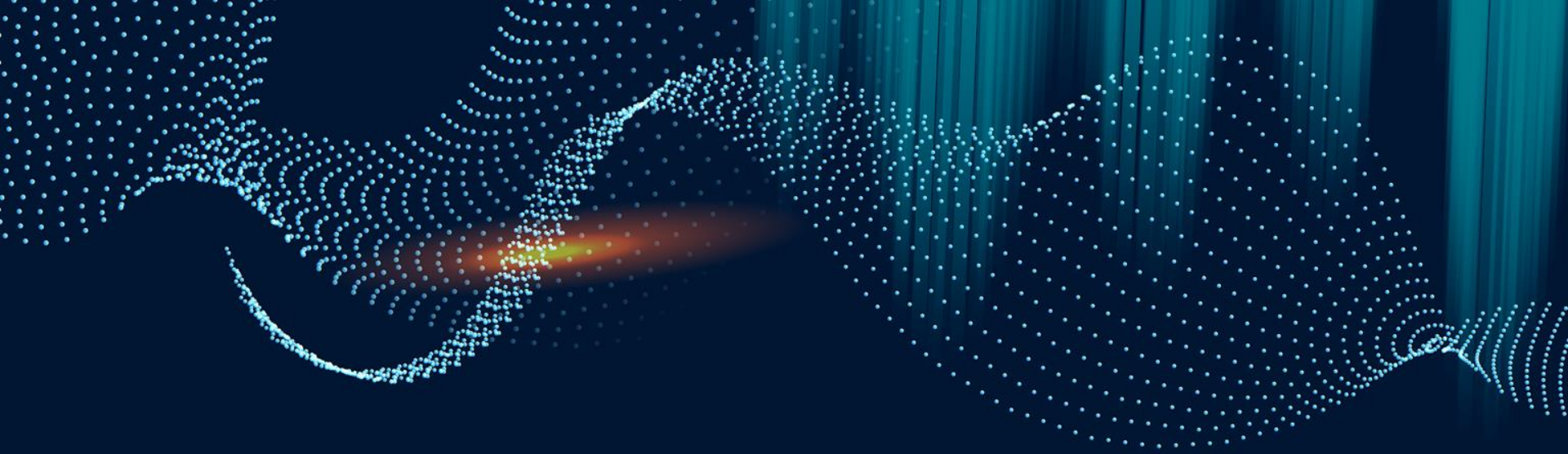# AI

Session 1 : Introduction to AI and Its Impact

Introduction to AI and Its Impact

01   What is AI?

02   AI in everyday life

03   Current trends in AI

04   Ethical implications and challenges

01 | What is AI?

What is AI?

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are designed to think and act like humans:

- understanding natural language
- recognizing patterns
- solving problems
- making decisions

Core Concepts of AI

Machine Learning (ML)

A subset of AI that enables machines to learn from data without being explicitly programmed.

Deep Learning

A specialized form of ML using neural networks to model and understand complex patterns, often applied in image and speech recognition.

Natural Language Processing (NLP)

The ability of AI to understand, interpret, and generate human language.

Computer Vision

AI's ability to interpret and understand visual information from the world, like recognizing faces or objects.

Types of AI

Narrow AI

AI that is designed to perform a specific task (e.g., chatbots, recommendation engines).
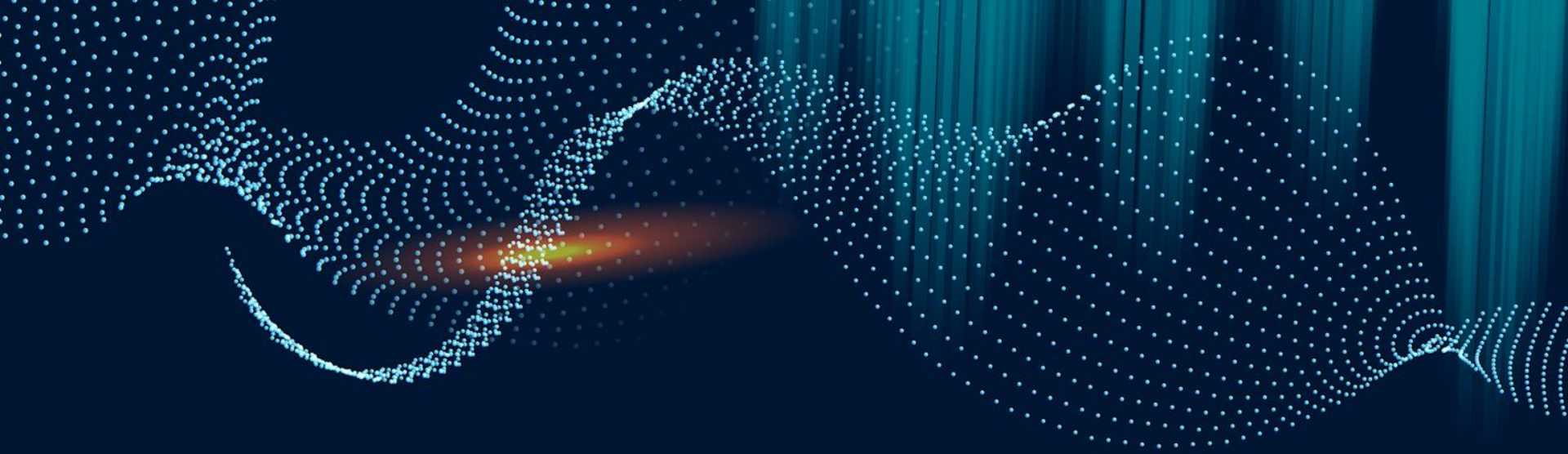
General AI

A theoretical form of AI that can perform any intellectual task that a human can do.

Superintelligent AI

Hypothetical AI that surpasses human intelligence.

02 | AI in everyday life

Applications of AI

Healthcare

AI aids in diagnostics, personalized treatment plans, and drug discovery.

Finance

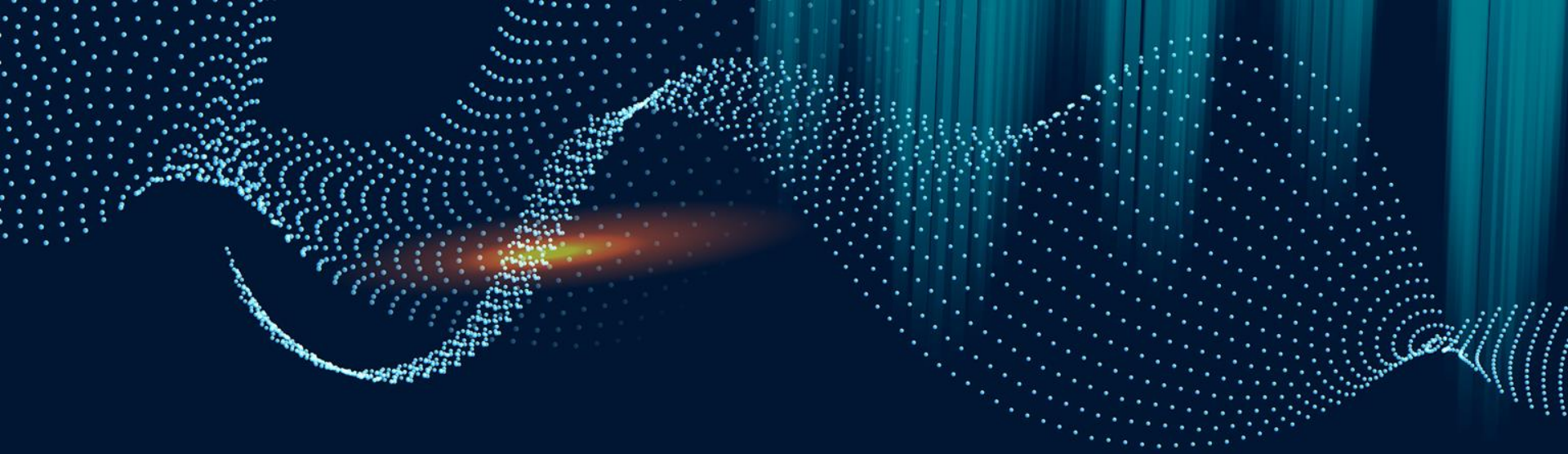AI is used for fraud detection, risk assessment, and trading.

Retail

AI powers recommendation systems, inventory management, and personalized marketing.

Marketing

AI is used in predictive analytics and chatbots.

03 | Current Trends

Current Trends

Generative AI

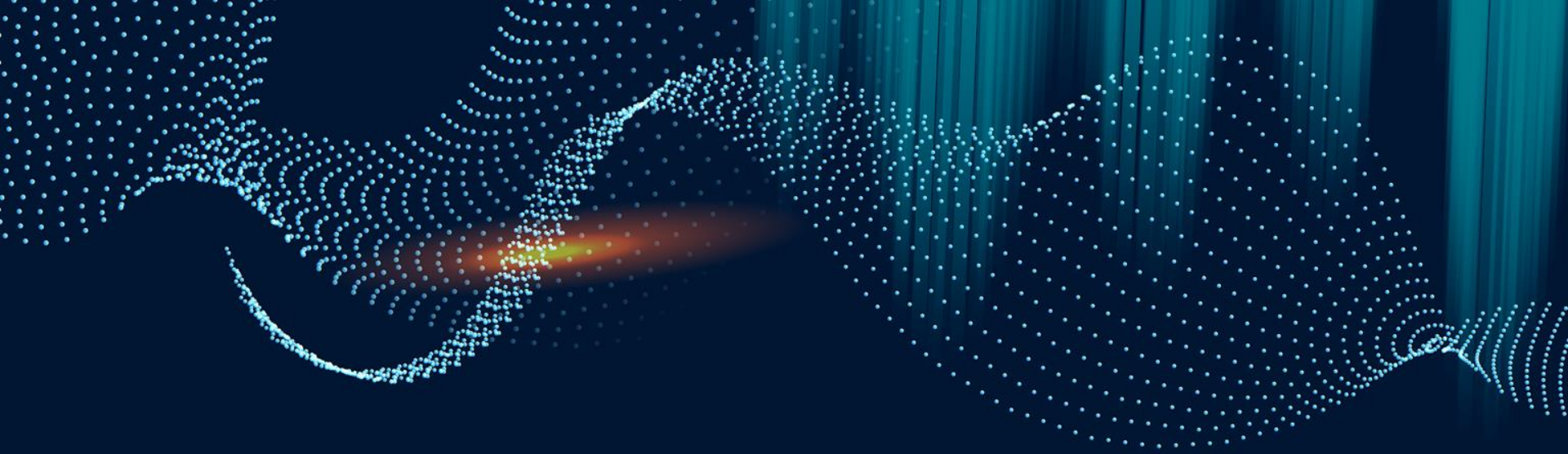Tools like GPT-4, DALL·E creating text, art, and more

Autonomous Systems

Self-driving cars, drones

Environmental Sustainability

Reducing carbon footprint, climate modeling

04 | Ethical Implications

Ethical Implications & Challenges

Bias and Fairness

AI systems can perpetuate and even amplify biases present in the data used to train them which can lead to discrimination in areas like hiring.

Privacy and Security

AI relies heavily on large datasets, often involving sensitive personal information. This raises concerns about how that data is collected, stored, and used, and whether individuals' privacy rights are respected.

Job Displacement

Workers in roles that are easily automated may face unemployment or the need for retraining. While AI may create new jobs, there is a risk that it will eliminate more than it creates, especially in the short term.
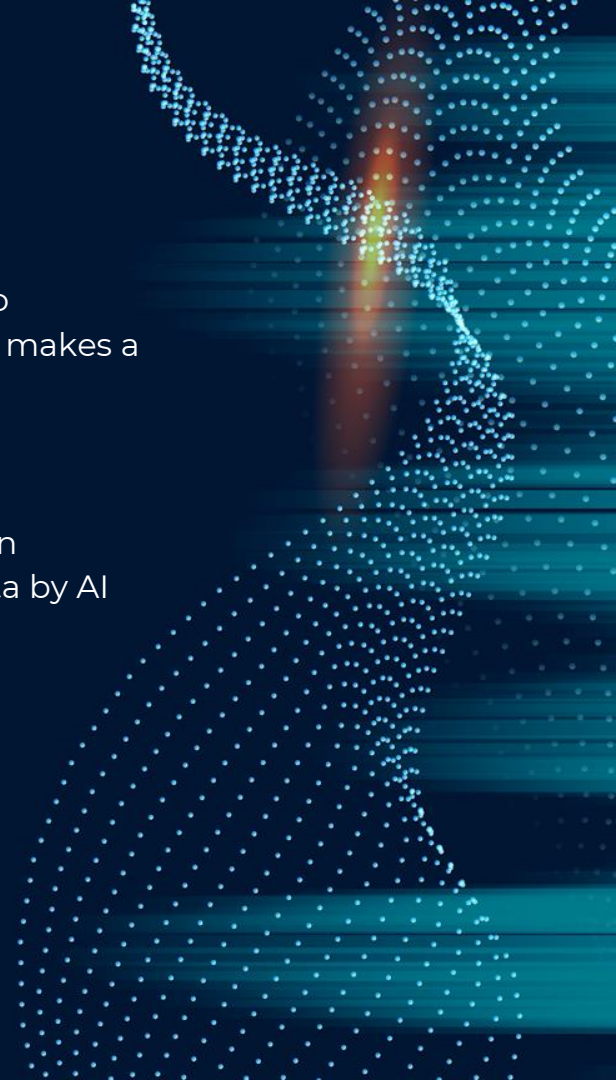
Ethical Implications & Challenges

Accountability & Transparency

Many AI systems are often referred to as "black boxes" because it is difficult to understand how they arrive at specific decisions. Who is responsible when AI makes a wrong or harmful decision?

Ethical Use of Data

When AI systems use data, it raises questions about whether users have given informed consent and who owns the data. The commercialization of user data by AI companies also raises ethical issues about exploitation and manipulation.

Q&A