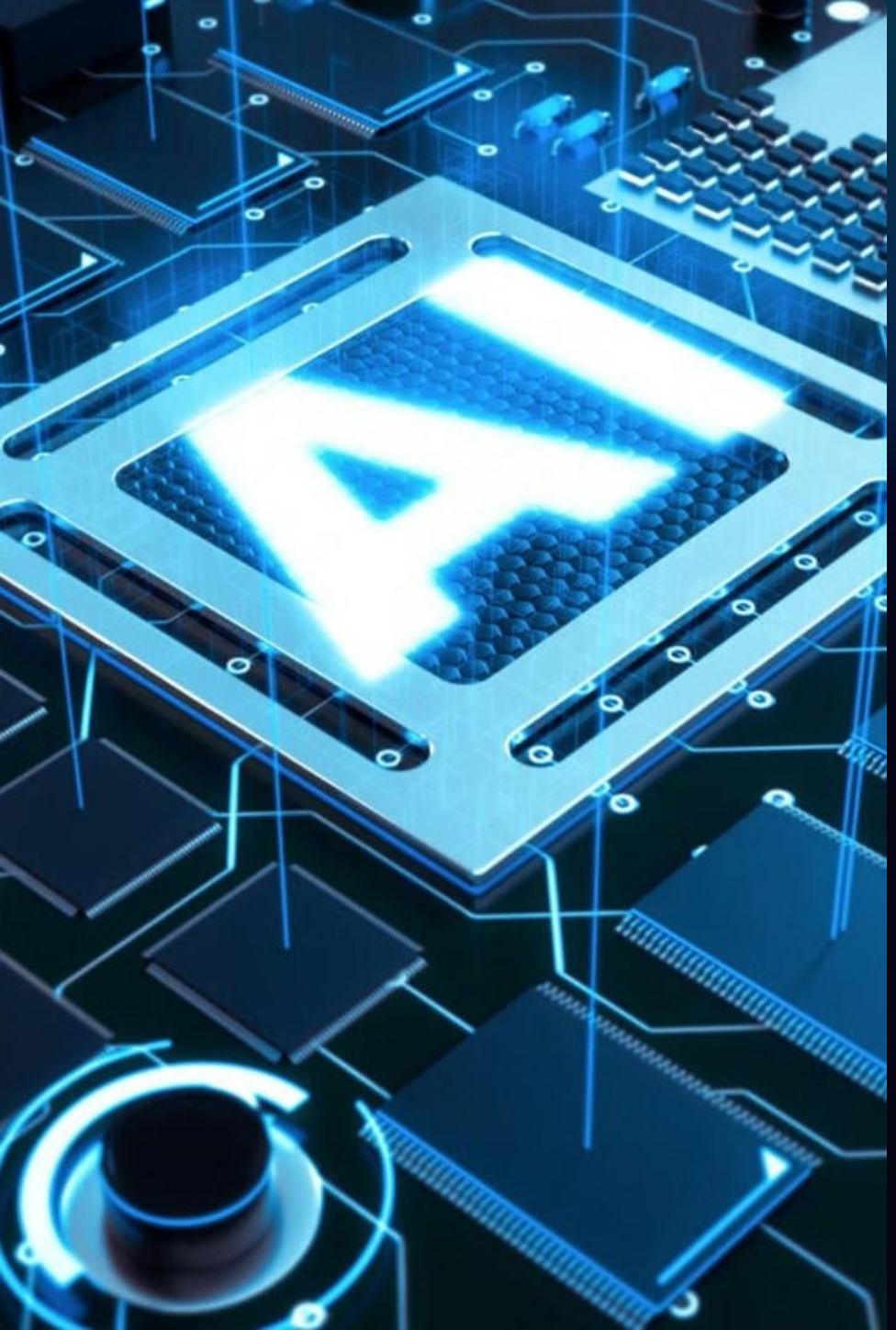


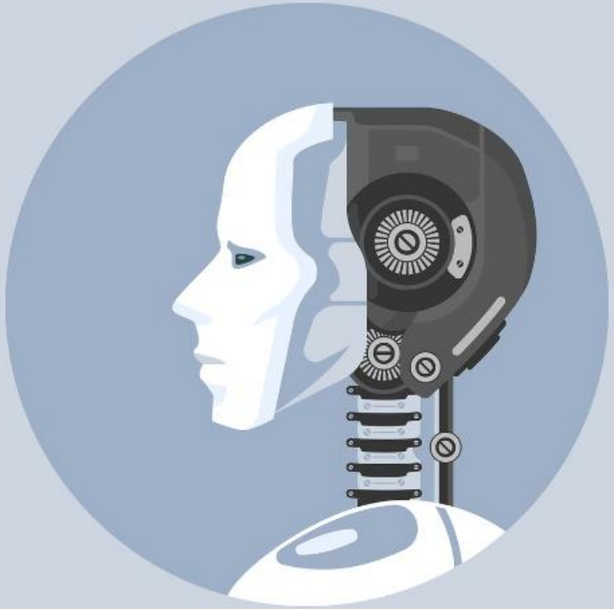
POWERPOINT PRESENTATION PRESENTATION FOR CA1

NAME- ARPAN KUMAR SINGH

ROLL-13000120041

SUB-PEC-CS701E

TOPIC - AI



Artificial Intelligence: Intelligence: A Journey Journey into the Future

Artificial intelligence (AI) is a rapidly evolving field that encompasses the development of intelligent machines capable of performing tasks that typically require human intelligence.

Defining AI: Capabilities and Limitations

Capabilities

AI systems are adept at tasks such as image recognition, natural language processing, and decision-making. AI is also being used in industries such as healthcare, finance, and transportation.

Limitations

Despite its advancements, AI still struggles with complex tasks requiring common sense and creativity. AI systems are often limited by their reliance on large datasets and lack of adaptability in novel situations.

Machine Learning: Algorithms and Applications

1

Supervised Learning

This involves training models on labeled data to predict outcomes. Examples include image classification and spam filtering.

2

Unsupervised Learning

This aims to discover patterns and insights from unlabeled data. Examples include customer segmentation and anomaly detection.

3

Reinforcement Learning

This involves training agents to learn through trial and error, interacting with an environment to maximize rewards. Examples include game playing and robotics.

Natural Language Processing: Chatbots and Language Understanding

Text Analysis

NLP involves analyzing text data to extract meaning and sentiment, enabling tasks like document summarization and translation.

1

Chatbots

Chatbots are AI-powered conversational agents that simulate human interaction, providing customer service or assistance in various domains.

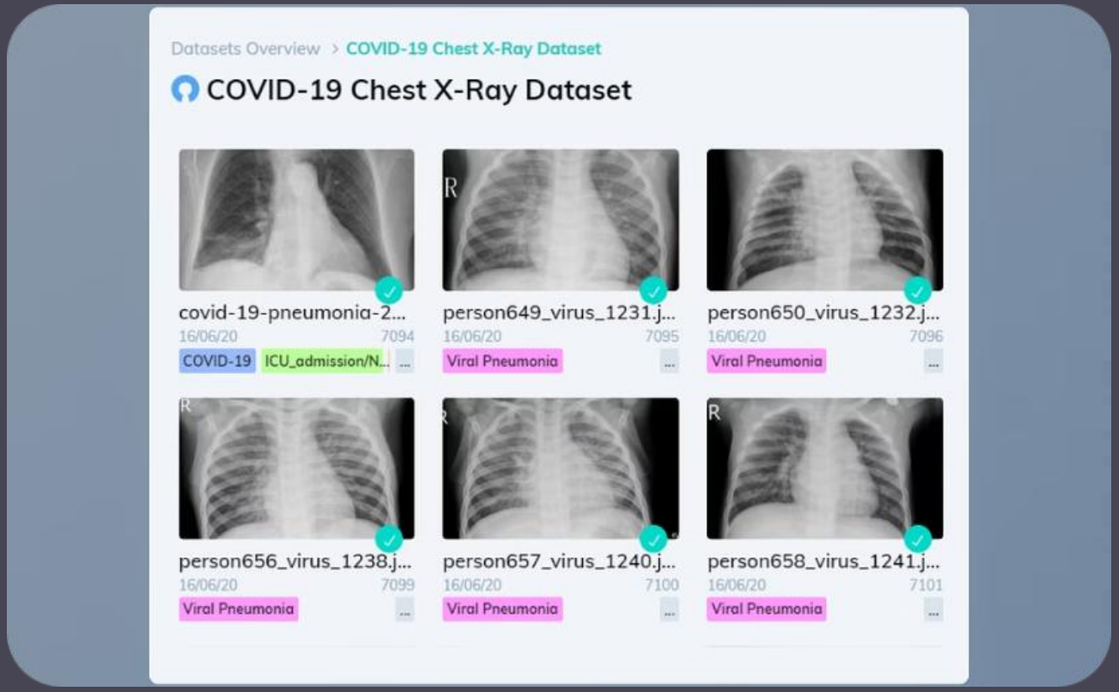
2

Voice Assistants

Voice assistants like Siri and Alexa use NLP to understand spoken commands and respond accordingly, revolutionizing how we interact with technology.

3

Computer Vision: Image and Video Analysis



Autonomous Vehicles

Computer vision enables self-driving cars to perceive their surroundings, navigate roads, and avoid obstacles.

Medical Diagnosis

Computer vision assists doctors in diagnosing diseases by analyzing medical images, such as X-rays and MRIs.

Robotics and Autonomous Systems

1

Industrial Automation

Robots are increasingly employed in factories to perform repetitive tasks, improving efficiency and reducing human error.

2

Healthcare Assistance

Robots are used in healthcare for tasks like surgery, rehabilitation, and medication delivery, enhancing patient care and precision.

3

Exploration and Research

Robots are crucial for exploring dangerous environments, such as deep-sea trenches or outer space, where human presence is risky.

Ethical Considerations in AI

Bias and Discrimination	AI algorithms can perpetuate biases present in training data, leading to unfair outcomes.
Privacy and Security	AI applications often require access to sensitive data, raising concerns about privacy and data breaches.
Job Displacement	The increasing use of AI in automation raises concerns about job displacement and the need for workforce retraining.

The Future of Artificial Intelligence

Cognitive Computing

AI will continue to advance, pushing the boundaries of human intelligence and enabling computers to solve complex problems.

Human-Robot Collaboration

AI will augment human capabilities, leading to partnerships between humans and robots in various domains, such as healthcare and manufacturing.

AI for Social Good

AI will be used to address global challenges such as climate change, poverty, and disease, leveraging its power for positive impact.