

PRESENTATION – TECHNICAL

Introduction

Greeting: Good morning/afternoon, everyone! My name is Lara and today, I will be presenting on Artificial Intelligence (AI) and its various applications in today's world.

Purpose:

The purpose of this presentation is to give you an understanding of what Artificial Intelligence is, how it works, and how it's applied in different industries like healthcare, finance, and manufacturing.

ARTIFICIAL INTELLIGENCE

Artificial Intelligence refers to the simulation of human intelligence in machines that are programmed to think and act like humans.

Core Areas of AI:

Machine Learning (ML): Algorithms that allow systems to learn from data without explicit programming.

Natural Language Processing (NLP): The ability of a machine to understand and process human language.

Computer Vision: Enabling machines to interpret and make decisions based on visual data.

Robotics: Machines capable of performing tasks autonomously or semi-autonomously.

How Does AI Work?

Data Input:

AI systems require large amounts of data to train models.

Data can be anything from images and text to sensor readings and transactional data.

Model Training:

Through machine learning algorithms, AI models are trained on this data to

recognize patterns, make predictions, or perform tasks.

Decision Making:

Once trained, AI can make decisions or take actions based on the learned patterns and new data inputs.

Example:

For instance, AI in email spam filters works by learning from past examples of spam and non-spam emails to make predictions about new incoming messages.

Applications of AI in Healthcare

Medical Imaging:

AI helps in diagnosing diseases through medical imaging techniques, such as detecting tumors or other abnormalities in X-rays or MRIs.

Personalized Medicine:

AI can analyze patient data to recommend personalized treatments based on individual medical histories and genetics.

Drug Discovery:

AI models can predict how different chemical compounds will interact with the body, speeding up the process of drug discovery.

AI in Finance

Fraud Detection:

AI helps detect fraudulent transactions by analyzing transaction data and identifying patterns indicative of fraud.

Algorithmic Trading:

AI-powered algorithms can make high-speed trading decisions in real-time based on market data and trends.

Customer Service (Chatbots):

Banks and financial institutions use AI-powered chatbots to handle customer inquiries and provide real-time assistance.

AI in Manufacturing and Automation

Predictive Maintenance:

AI systems predict when machines or equipment are likely to fail, allowing businesses to perform maintenance before a breakdown occurs.

Robotic Process Automation (RPA):

AI is used to automate repetitive tasks like assembly line work, improving efficiency and reducing human error.

Supply Chain Optimization:

AI algorithms help companies predict demand, optimize inventory, and improve logistics in supply chains.

Future Trends in AI

AI in Autonomous Vehicles:

Self-driving cars are expected to become more prevalent, using AI to navigate and make decisions on the road.

AI in Smart Cities:

AI will be integral in managing smart city systems like traffic control, energy usage, and public safety.

AI and Human Collaboration:

Rather than replacing humans, AI will assist in tasks, enabling better productivity and decision-making in various industries.

AI in Creativity:

AI is also being used to assist in creative fields like music composition, art, and even writing.

Conclusion

Summary:

Artificial Intelligence is transforming multiple industries, from healthcare and finance to manufacturing and beyond.

While there are challenges like data privacy and bias, AI's potential to improve

efficiency, create new opportunities, and solve complex problems is immense.

Closing Thought:

The future of AI is promising, and its applications will continue to expand, bringing both opportunities and challenges. It is important for us to harness its power responsibly.