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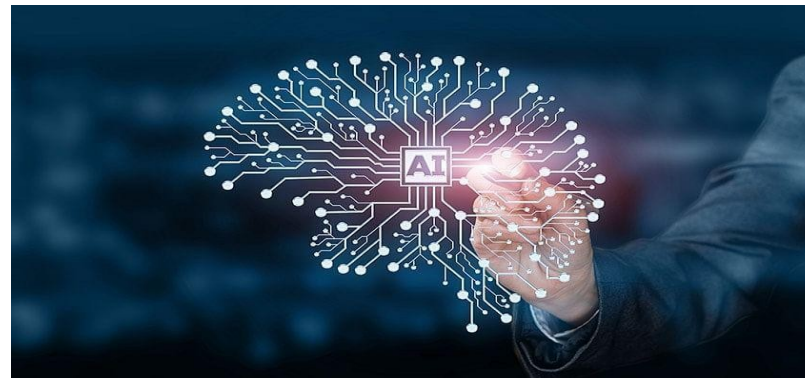
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ARTIFICIAL INTELLIGENCE FOR ELECTRICAL ENGINEERING

TOPIC : **ARTIFICIAL INTELLIGENCE**



9/3/2024

19EET401 / AI TECHNIQUES IN ELECTRICAL ENGINEERING / S.SHARMILA/AP/ EEE

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TOPIC OUTLINE



- *Definitions. of artificial intelligence.
- *Important methods of artificial Intelligence.
- *programming techniques of artificial intelligence.

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DEFINITION



Artificial intelligence (AI) broadly refers to any human-like behavior displayed by a machine or system. In AI's most basic form, computers are programmed to “mimic” human behavior using extensive data from past examples of similar behavior. This can range from recognizing differences between a cat and a bird to performing complex activities in a manufacturing facility.



IMPORTANCE OF ARTIFICIAL INTELLIGENCE

1. AI Attains Phenomenal Accuracy

AI achieves remarkable precision through deep neural networks, previously impossible. For instance, your interactions with Google Search and Alexa are all deep learning-based that keep getting more precise the more we use them. AI techniques are even used in the medical fields to discover cancer cells on MRIs with high precision as highly trained radiologists.

2. AI Is Reliable & Quick

AI performs frequent, voluminous, and computer-generated tasks reliably. However, for this, human skills are required to set up the system & ask proper questions.





3. AI Adds Intelligence To Products

AI won't be sold as an individual product. Instead, products that you use will be enhanced with AI integration, such as Apple products created a buzz with the Siri feature. Chat bots, automation, and smart devices together with massive data can improve several technologies at home and the workplace.

4. AI Evaluates Deeper Data

Big data and computing power. it has been possible to develop a fraud detection system which was almost impossible a few years back. You require much data to train deep learning models as they learn straight from the data. The more the data, the more accurate they become.

5. AI Fully-utilized Data

Need to implement AI in place to get the answers from the data, The role of data is more critical than ever before. it gives an edge over your competitors if you have the best data system in this competitive industry as the best data will win.



PROGRAMMING METHODS OF ARTIFICIAL INTELLIGENCE

C# can be used to develop high level machine learning models using Microsoft .NET suite. ML.NET was developed with integration to existing .NET projects in mind, simplifying the process for existing software using the .NET platform.

AIML (meaning "Artificial Intelligence Markup Language") is an XML dialect for use with A.L.I.C.E. type chatter bots.

Python is widely used for artificial intelligence, with packages for several applications including General AI, Machine Learning, Natural Language Processing and Neural Networks. The application of AI to develop programs that do human-like jobs and portray human skills is Machine Learning. Both Artificial Intelligence and Machine Learning are closely connected and are being used widely today.



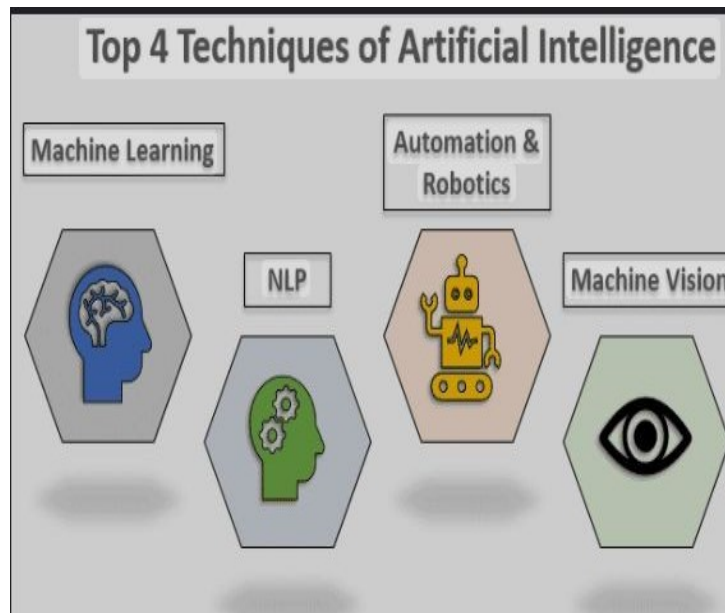
Smalltalk has been used extensively for simulations, neural networks, machine learning and genetic algorithms. It implements the purest and most elegant form of object-oriented programming using message passing.

STRIPS is a language for expressing automated planning problem instances. It expresses an initial state, the goal states, and a set of actions. For each action preconditions (what must be established before the action is performed) and post condition are specified.

Lisp was the first language developed for artificial intelligence. It includes features intended to support programs that could perform general problem solving, such as lists, associations, schemas (frames), dynamic memory allocation, data types, recursion, associative retrieval, functions as arguments, generators (streams), and cooperative multitasking.



TECHNIQUES OF ARTIFICIAL INTELLIGENCE



1. Machine learning
2. NLP
3. Automation & robotics
4. Machine vision



RECAP....



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thank you