

The ICFAI University, Jharkhand Grooming Professionals. With Values.

International Webinar

The Exciting World of AI / ML - Applications and Career Prospects



Invites you to International Webinar on

**The Exciting World of AI/ML -
Applications and Career Prospects**

Moderator



Prof. ORS Rao, Vice Chancellor

Industry Expert



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Brief Profile of Industry Expert

- PhD in Computer Science and Engineering from State University of New York
- Conducts research on Artificial Intelligence/ Machine Learning / Image Processing
- Co-founder of two startups: Maxerience Electrosystems and Koinearth .
- Worked at Microsoft, HP Labs, and Wayne State University.
- Senior mentor at INSOFE
- Visiting Faculty at Carnegie Mellon University



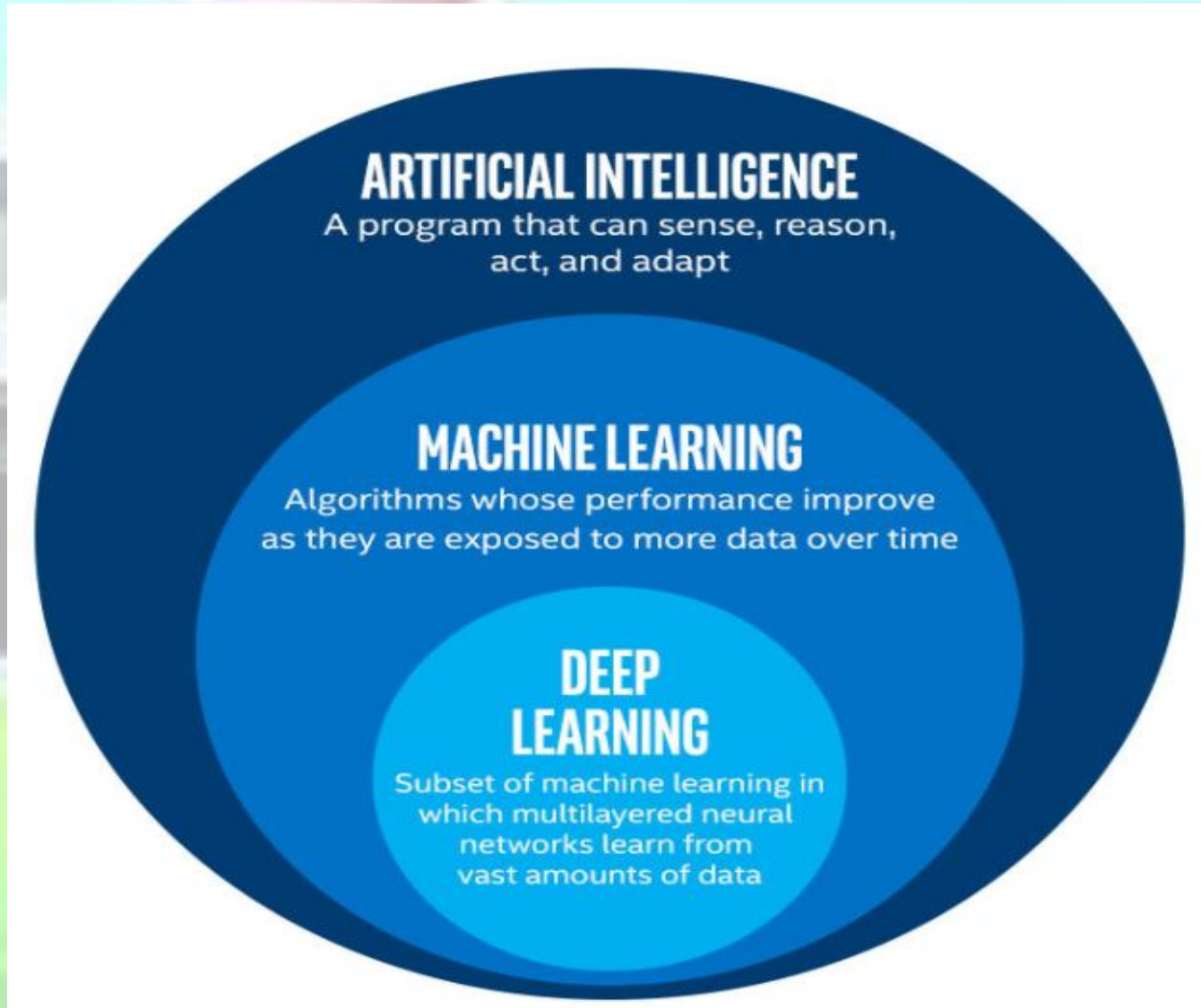
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Introduction

- The term AI was first coined by John McCarthy in Dartmouth Conference in 1956.
- In 1997 IBM Big Blue ,using AI, won chess match against Garry Kasparov
- AI became popular all over the world thru the American science fiction film , AI, released in 2001, directed by Steven Spielberg.
- In 2010 , Indian Science fiction Hindi movie, Robot portrayed the potential of AI wherein emotions are programmed in a Robot.
- But it seems to have reached critical mass in the corporate world very recently.
- Why has AI taken a centre stage now, after so many years ?
- ...Because Developments in Enabling technologies like Computing Power, Cloud, Big Data Analytics etc have matured now

Terms- AI, ML and DL



Definitions

- Artificial intelligence : refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions.
- Machine Learning : Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.
- Deep learning : Deep learning is an artificial intelligence function that imitates the workings of the human brain in processing data and creating patterns for use in decision making
- Computer vision is an interdisciplinary scientific field that deals with how computers can gain high-level understanding from digital images or videos.
- Natural Language Processing :Natural Language Processing (NLP) refers to AI method of communicating with an intelligent systems using a natural language such as English.

AI Applications

- In diverse sectors like Manufacturing, healthcare, Banking ,Insurance ,Telecom, Education , Food Processing etc.
- Application in Food Processing to screen potatoes for quality (using Machine Vision) explained
- Range of applications from customer facing (Chatbots, Virtual Assistants) to Decision making
- Now AI playing a vital role in Digital Transformation of Business

AI in Health Care

- How AI is helping in Health Care?
 - Diagnostics is a major application
 - AI based Diagnostic Equipment like X-Ray, Sonography MRI, CT Scanning machines
 - AI helps in isolating and highlighting even minor abnormalities
 - It saves time of expert Doctors to detect the minute problems.

AI in Education

- AI helps in Effective Teaching-Learning-Assessment of the students
- It can help in identifying the subjects/chapters where an individual student is weak
- AI also can help in identifying the appropriate pedagogy for individual students
- It helps in Personalised Learning

AI's help in COVID -19 Times

- How AI is helping in Covid -19 ?
 - AI driven Diagnostic Models developed i.e. CT SCAN to detect the Corona virus.
 - Several Predictive analysis got modelled in AI to Detect the confirmed case, recovered case, death case rate
 - Direction of propagation / Community transmission can be analysed .
 - AI is also helping in Drug Discovery and Vaccine Development

Career Prospects in AI

- AI Market expected to grow at 30-40% CAGR to reach \$1 Trillion in the next 6-7 years
- Due to skill shortage in AI , good are for career building
- Opportunities for IT as well as non-IT graduates
- For IT careers, strong fundamentals in Mathematics, particularly Calculus is important
- Students should first build a deep domain knowledge in the filed of interest . Only then the student can build AI solutions in the area
- Law Students also can pursue a career in AI, as Legal technology is making rapid strides in areas like searching for past judgements

Q & A – Careers

- What skills are needed to Start career in AI/ML?
 - For IT Careers
 - Be good in Basics of Computer Science (like Data structures and fundamentals of programming)
 - Good fundamentals in Mathematics
 - For non-IT graduates
 - Deep domain Knowledge
 - Analytical mind

Q&A- AI compared to human brain

- What percentage of the brain function are we able to simulate in AI , as of now ?
 - Not even 10%
 - AI can do complex calculations very quickly as it is driven by computer , which is driven by electronic circuits , which works on Binary principles
 - But Brain has multiple technologies embedded and work in an integrated manner (Neural Networks, Biology, Chemistry etc). Brain memory does not switch off
 - Billions of brain cells work continuously and together

Q &A

- How can AI help in agriculture ?
 - by predicting the weather forecast
 - By predicting the soil quality
 - By predicting the rainfall in mm.
- What are the applications of AI in Disaster Management ?
 - Drone based technology in real time , get the analysis of disaster.
 - Through satellite images

Q & A

- In Covid -19 situation most of the people are get depressed, So how can AI detect the behaviour tendency of the people through social media platform, so that they may counselled?
 - a lot of research is going on in this area
 - it can be done mainly through emotions analysis
 - Natural language processing may also help
 - But it is difficult to capture the data.

Q & A

- In E-commerce , how can AI recommend the right similar products to customers ?
 - AI can track the consumer behavioural responses and match the interests of the consumer with the product features and recommend the appropriate product
- How can AI help in Draught predictions in agriculture?
 - Satellite image is used for prediction
 - By the help of sensors
 - Especially in draught prediction government have introduced many projects
 - It also have the parameters like soil condition , water ground level etc.

Snapshots

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Welcomes

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Thank You



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