



September 2021 | Volume 1 | Edition 1

AIML INSHORTS

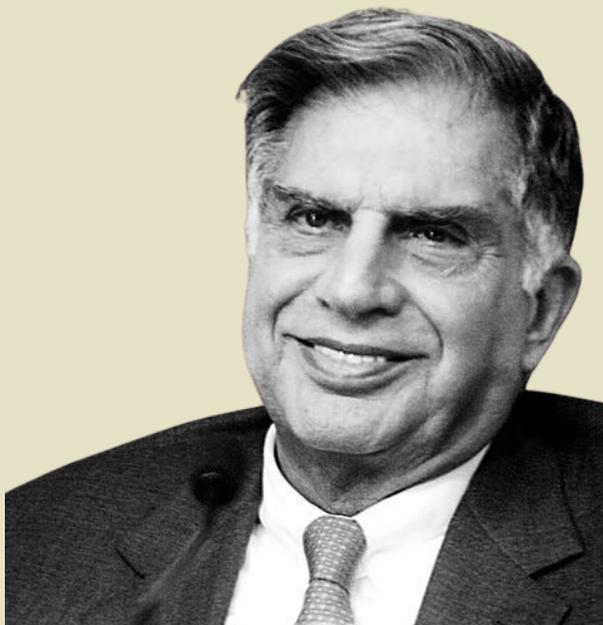
Department of Computer Engineering with Specialization in AIML

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UPCOMING EVENTS

Add-on course on
"Probability and
Statistics" for all
specialization branches



" IF YOU WANT TO
WALK FAST, WALK
ALONE. BUT IF YOU
WANT TO WALK
FAR, WALK
TOGETHER

- Sir Ratan Tata



MESSAGE FROM OUR LEADERS

CAMPUS DIRECTOR

Dear Students, Staff, and all stakeholders, we have started with emerging branches at UCOE namely Artificial intelligence and Machine Learning and Data Engineering from AY 2020-21. AI & ML and DE are wide-ranging branches of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. The field of artificial intelligence has been an interdisciplinary endeavor, requiring deep knowledge of both computational and human sciences. 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. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves.

We are in second year of these branches and launching their first edition of monthly newsletter. Our firm conviction about education that, we are not just teaching our students but are providing them with a career; highly competent professional career and at the same time how to be wholesome individuals to make them contribute their best in the service of our nation and the world, is getting thoroughly fortified as time passes. This, by no means, is as easy as said, but we have accepted this challenge at the very start of the institution and encouraged with the success, are determined to carry forward with it, enthusiastically, into the future. We continue to and shall always continue to treat our student community as our valuable stakeholders and we do not aim at mere stakeholder satisfaction but have been taking it far beyond to approximate the pinnacle of students Delight.

Our intensive commitment and dedication to our "Vision" and "Mission" statements and thoroughly effective steps taken to achieve them with your cooperation, involvement and Support are the main factors that led to achieving the above results and on this occasion of newsletter launch, I take this opportunity to thank you and request you to extend the same in the future as well.

Dr. Jitendra .B. Patil

HEAD OF DEPARTMENT

The Department of AIML at UCOE is strongly committed to impart innovative and quality technical education at undergraduate level.

AIML in the 21st century is the skill of the century. It has had a tremendous impact on human civilization. The artificial intelligence and in general the intelligent systems have changed how we work, how we communicate, how we teach and learn, how we entertain, and so forth. AI and ML has become a fundamental tool for augmenting the human knowledge, which is an essential part of creation, discovery, and innovation.

The main goal of the Department is to provide an experiential learning opportunities such as hands-on training, project-based courses, research projects, and internships which provide a solid foundation to work in interdisciplinary teams that invents the future for which the Department covers a wide expertise in the areas of Algorithms, Artificial Intelligence, Image Processing, Pattern Recognition, Machine Learning, Data Mining, Big-Data Analytics, and Computer Security led by qualified and experienced team of faculty members.

In addition to state-of-the-art curriculum, more emphasis is placed on enriching the students learning experience by providing value-added courses, skill-development programs, and participate in technical competitions, hackathons at all levels including state, national and international platforms.

This is the key to make our students successful in AIML at UCOE! I am confident that the Department of Artificial Intelligence & Machine Learning at UCOE is strongly prepared to face the new exciting challenges in this new digital era and also to be one of the best institutions in the state of Maharashtra and in India.

Together we shall achieve great heights.

Best Regards and Great Future!!
Dr. Ekta Upadhyay



STEPPING STONES TO SUCCESS

CAREER WALKTHROUGH

Artificial Intelligence is a course that will make one's career future-proof. We all know that as days are passing by, people are trying to make computers think by itself. Without that, automated systems cannot work efficiently. Today we enjoy talking with SIRI. Today, we love the efficiency and quick delivery of Amazon. We need fact-checking software that can check facts automatically. We need to replace our soldiers with robotic soldiers so that no mother ever loses her son. The applications of artificial intelligence are endless. There are many jobs that will be available to a candidate opting for an artificial intelligence course. The three main areas that require the expertise of qualified AI engineers are:



- **Machine Learning Engineering** : Although we think Artificial Intelligence machines think autonomously, to create the logic-based system in the AI, we need to feed the system with vast amounts of data. We cannot just feed unstructured data. The AI machines need a comprehensive, logical, and vast amount of data in order to let their algorithm work properly. This is the work of the machine learning engineers. Think of machine learning engineers as teachers who inculcate basic ethics and logic in the students. After that, the student uses the teachings of the teachers to come up with their own understanding of the world. The work of ML engineers is extremely critical. They must not feed any data that can make the AI biased.
- **Data Science** : Similar to machine learning engineers, data scientists analyze Big Data to understand how it can be fed into the AI system to make the AI more efficient. Data scientists are perhaps the most important people in the AI world - they need to be aware of both AI and ML to use Big Data in a useful manner.
- **Artificial Intelligence Engineering**: If machine learning engineers are the teachers, the artificial intelligence engineers are the parents that teach the AI system how to work using the data fed into it. They are the ones who build the neural network- the brain of the AI system. Building a neural network is a work of art- it needs patience as well as strong logical prowess.



AI REALM

FOR ALL MANKIND

Artificial intelligence is already impacting virtually every industry and every human being. This incredible technology has brought many good and questionable things into our lives, and it will create an even bigger impact in the next two decades.

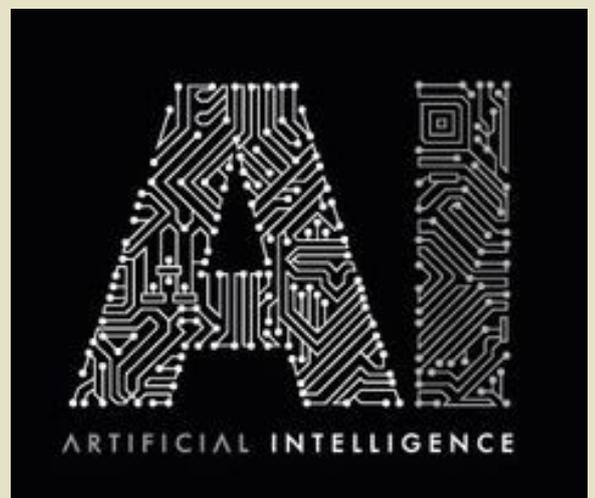
According to Ray Kurzweil, one of the most-known futurists, computers will have the same level of intelligence as humans by 2029. Kurzweil stated to *Futurism*, "2029 is the consistent date I have predicted for when an AI will pass a valid Turing test and therefore achieve human levels of intelligence. I have set the date 2045 for the 'Singularity' which is when we will multiply our effective intelligence a billion fold by merging with the intelligence we have created."

However remarkable this technology may be, it doesn't come without some major concerns for humanity. Movies like *Ex Machina*, *Transcendence* and *Her* show us the dark side of AI reaching human-level consciousness. There have also been some serious concerns coming from scientists, politicians and technologists that should not be taken lightly.

AI will make most people better off, but its advances will also affect what it truly means to be human in the 21st century. This article explores the juxtaposition of the risks and benefits of what is about to come

Hence, with the pace of technology innovation ever increasing, it is important to be aware of the upcoming disruptions and not just blindly enjoy the benefits that AI brings. Computer superintelligence could threaten our very existence, and even if it doesn't, there are still big issues that need to be resolved if we can responsibly bring forth the Fourth Industrial Revolution.

Courtesy- Forbes

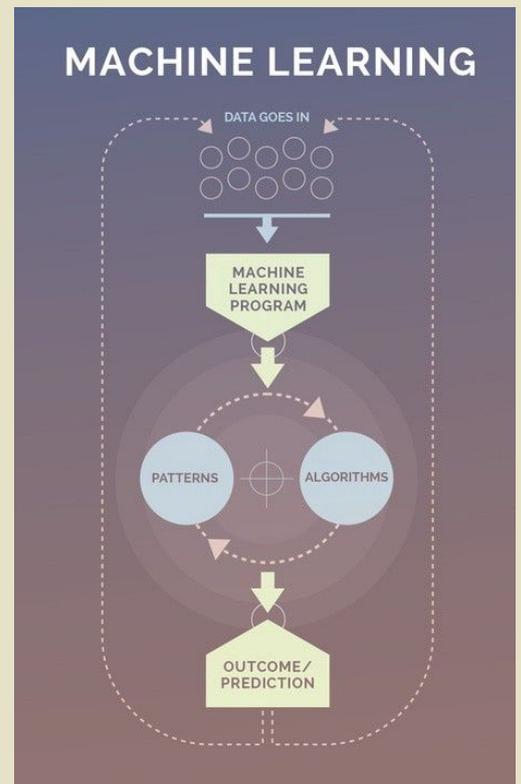




MAN VS MACHINE

INTRO TO ML

Machine learning refers to a class of computer algorithms that learn from examples rather than being explicitly programmed to perform a task. It learns to formulate a general rule from a set of concrete examples. Thus, like human learning, the computer becomes capable of improving its performance from acquired knowledge. The difference is that, at the current state of our knowledge, the computer needs many more learning examples than people do. Machine learning is the basis of artificial intelligence. It can be subdivided into shallow and deep learning, depending upon the structure and complexity of the algorithm. .

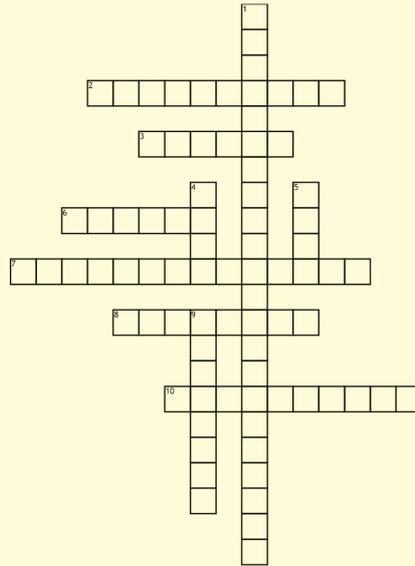


Several examples are given, both because of their own importance and because they help to introduce some of the concepts and principals involved in deep learning. It is important to recognize that both forms of machine learning are in common use, as there are situations in which one or the other is optimal for a given task. For deep learning, additional concepts such as multilayer connectivity, backpropagation, and convolution are described in detail, as these are the factors that must be taken into account when deploying these models.

Courtesy- Stanley Cohen MD



CROSS CONNECTION



Across

- 2. By using a machine in agriculture that distinguishes weeds from crops, 95% of ... can be reduced.
- 3. AI designed by Tony Stark
- 6. Whose company is on the forefront of self-driving car technology?
- 7. What are the robots using to see the store shelves?
- 8. It' possible, that AI will may be transforming the...
- 10. What is another area that is booming in the field of AI?

Down

- 1. The term describes the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.
- 4. people's biggest ... is that AI will take over.
- 5. This product (from apple) is a pioneer of artificial intelligence.
- 9. "experts believe a profound technological shift is ..."

ANS

- 1. ARTIFICIAL INTELLIGENCE
- 2. HERBICIDES
- 3. JARVIS
- 4. FEAR
- 5. SIRI

- 6. GOOGLE
- 7. COMPUTER-VISION
- 8. INDUSTRY
- 9. UNDERWAY
- 10. HEALTHCARE



REACH US



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