

Join Today!

AIML4Schools



By Prof M M Pant

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*An Introductory Program for class 11 students of
all subject streams*

Duration: 2 Weeks, Delivered on WhatsApp

Scheduled on 1st and 3rd Monday of every month

Batch registrations are open! Write to sbhat@greenworkforce.in



Overview - Nano Learning

AIML4Schools is an introductory 10 hours program for learners at class 11 of Schools. The learning is not limited to Science stream students alone, because **Artificial Intelligence** (AI) is going to impact all areas of human activities. The learning program is Structured as 12 sessions of about 50 minutes each.

Our default model is to run it as a **WhatsApp** course that can be accessed from a mobile phone (Android or iOS) anywhere. The course will run for 2 weeks (Monday to Saturday) with 5 posts per day of content that can each be transacted in about 10 minutes. The time at which the posts will be made every day are after School hours at 4:30 pm, 5:00pm,5:30pm,6pm and 6:30 pm.

Two batches will run every month. One beginning on the first Monday of the month and the other beginning on the third Monday of the month.

10 Hours Learning - spread across 2 weeks, 12 Topics, 60 Message Posts

Week 1

1: The evolution of AI to its present state: what can AI do today?

- 1.1@4:30pm: The early years
- 1.2@5:00pm: The winter of AI
- 1.3@5:30pm: The resurrection of AI
- 1.4@6:00pm: Drivers of the resurgence of AI
- 1.5@6:30pm: What can AI do today?

2: Why School students should learn about AI,ML and CT?

- 2.1@4:30pm: What International political leaders are saying?
- 2.2@5:00pm: What Technology and business leaders are saying?
- 2.3@5:30pm: Why learning early matters?
- 2.4@6:00pm: Overcoming learning resistance
- 2.5@6:30pm: How it helps in making better choices for further education?

3: Computational Thinking: Meaning, definitions and importance in the context of AI

- 3.1@4:30pm: Computational Thinking: Meaning and definitions
- 3.2@5:00pm: Computational Thinking : in the context of Artificial Intelligence and Machine Learning
- 3.3@5:30pm: Algorithms
- 3.4@6:00pm: Learning Algorithms
- 3.5@6:30pm: Heuristics

4: Relationship between Artificial Intelligence, Machine Learning and Deep Learning

- 4.1@4:30pm: The Landscape of Artificial Intelligence
- 4.2@5:00pm: Machine Learning
- 4.3@5:30pm: Deep Learning
- 4.4@6:00pm: What are Artificial Neural Networks?
- 4.5@6:30pm: What problems are Artificial Neural Networks most suitable for?

5: Artificial Neural Networks

- 5.1@4:30pm: Feed forward neural network
- 5.2@5:00pm: Recursive Neural Networks
- 5.3@5:30pm: Recurrent Neural Networks
- 5.4@6:00pm: Convolutional Neural Networks
- 5.5@6:30 pm: An overview of other ANNs.

6: Mathematics for AI and Machine Learning

- 6.1@4:30 pm: Where is the Mathematics used?
- 6.2@5:00 pm: Linear Algebra
- 6.3@5:30 pm: Calculus
- 6.4@6:00 pm: Probability and Statistics
- 6.5@6:30 pm: Optimisation techniques

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Week 2

7: Object Recognition and Computer Vision

- 7.1@4:30pm: Basic Principles of Computer vision: the foundations
- 7.2@5:00pm: What does it mean to have vision? Object tracking and localisation
- 7.3@5:30pm: How do Machines recognise objects? Possible approaches
- 7.4@6:00pm: Stages of an image classifier
- 7.5@6:30 pm: Convolutional Neural Networks for visual recognition

8: Autonomous Transportation: How does it work

- 8.1@4:30pm: The technical challenges to driverless cars
- 8.2@5:00pm: How they work? The technology leaders
- 8.3@5:30pm: The six Levels of driving Automation
- 8.4@6:00pm: Machine learning applied to autonomous transportation
- 8.5@6:30 pm: Impact that autonomous transportation will have

9: Robots, Drones and humanoids

- 9.1@4:30pm: Traditional robots
- 9.2@5:00pm: AI and Robotics
- 9.3@5:30pm: Drones
- 9.4@6:00pm: Swarm Robotics
- 9.5@6:30 pm: Humanoids

10: Speech Recognition and conversational interfaces; Chatbots and Machine Translation

- 10.1@4:30pm: What is a conversational interface?
- 10.2@5:00pm: The Challenges in Speech Recognition?
- 10.3@5:30pm: Natural Language Processing
- 10.4@6:00pm: Chatbots
- 10.5@6:30pm: Machine Translation

11: The Technologies from IBM Watson, Google Tensorflow, Amazon and Apple

- 11.1@4:30pm: IBM Watson
- 11.2@5:00pm: Google Tensorflow
- 11.3@5:30pm: Microsoft
- 11.4@6:00pm: Apple
- 11.5@6:30pm: Amazon

12: The Implications of AI: social, ethical and regulatory issues

- 12.1@4:30pm: The disappearing jobs
- 12.2@5:00pm: The new job opportunities
- 12.3@5:30pm: The Gig economy
- 12.4@6:00pm: The Ethics of AI
- 12.5@6:30pm: Learning more about AI

Begin your Lifelong Learning journey with Prof M M Pant!

LEARNING

FOR

 @mmpant

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Prof M M Pant is a Ph.D. in Computational Physics with a professional degree in Law. He has taught at MNIT Allahabad, University of Western Ontario, Canada, IIT Kanpur and Indira Gandhi National Open University. He has been deeply associated with the IIT system, having his Ph.D from IIT Roorkee, being a faculty for about a decade at IIT Kanpur and a member of the Board of Management IIT Delhi for 6 years.

After a long innings of 50+ years as an academic researcher, a lawyer and an educational entrepreneur he is now exploring new pedagogy, technology and curricula for the future, with focus on the **Artificial Intelligence** driven period heralding the fourth Industrial Age. His mission is to promote public understanding of **emerging technologies**.

His special focus is on mobile **Whatsapp-based lifelong learning**, transcending traditional education, and blending personalised and social learning.

