

Course Contents

- Introduction to Artificial Intelligence & Machine Learning
- Introduction of Python Programming
- Regression Analysis
- Supervised Models e.g. Bayesian Networks, Decision Tree, Support Vector Machines etc.
- Unsupervised Learning
- Clustering: K Means, C-Means, Agglomerative Clustering
- Ensemble Learning Models Boosting, Bagging, Stacking etc.
- Introduction to Neural Networks and Deep Learning
- Case Studies of AI, ML and DL Applications
- Hands on Sessions using Python.

Scope of the Online FDP Programme

"Machine Learning" is one of the most popular technology among all data scientists and machine learning enthusiasts. It is the most effective Artificial Intelligence technology that helps create automated learning systems to take future decisions without being constantly programmed. Machine learning is a buzzword for today's technology, and it is growing very rapidly day by day. In general, there are three types of learning and these are supervised learning, unsupervised learning, and reinforcement learning. We will also discuss on some of the most common challenges that are presently faces by researcher's and industrialists that may provides you some future work direction to add possible solution for the real time problems. This programme is specifically designed to provide the practical knowledge to the aspiring Machine Learning and Artificial Intelligence enthusiasts. Hands-on sessions will explore the depth knowledge in Machine Learning and Artificial Intelligence.

Eligibility

The Programme is open to the Faculty of AICTE approved Institutions, Research Scholars, PG Scholars, Participants from Government and Industry interested in the field of Artificial Intelligence and Machine Learning.

Certification

The Certificates shall be issued by AICTE Training and Learning (ATAL) academy to those participants who have overall 70% attendance will get certificate and above 90% will get Distinction.

Important Dates

Last date (Online Registration):10-02-2023

Confirmation by Email: 11-02-2022

Duration: 13-02-2023 to 24-02-2023

Coordinators

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AICTE Training and Learning (ATAL) Academy



Blended/Hybrid mode Two Weeks Faculty Development Programme (FDP)
On

“Recent Trends in AI and Machine Learning Techniques - Applications Perspectives”

13th February – 24th February 2023

Patron

Dr. S.Venugopal
Director, NIT Nagaland

Convener

Dr. Lithungo Murry
HOD & Assistant Professor
Computer Science and Engineering

Coordinator

Dr. J. Arul Valan
Assistant Professor
Computer Science and Engineering



Organized by

NATIONAL INSTITUTE OF TECHNOLOGY NAGALAND
Chumukedima, Dimapur, Nagaland-797103
Website: www.nitnagaland.ac.in

About the Institute

National Institute of Technology Nagaland (NIT Nagaland) is a higher education technology institute located at Dimapur in Nagaland and was set up by the Government of India in 2009, as part of the Eleventh Five-Year Plan (2007–2012) for imparting technical education in the state of Nagaland. NIT Nagaland is located at Chumukedima, about 14 kilometers from Dimapur, Nagaland. The campus is well connected through proper means of transport and communication. At present there are six undergraduate courses namely Electrical and Electronics Engineering, Electronics and Communication Engineering, Computer Science and Engineering, Civil Engineering, Mechanical Engineering & Electronics and Instrumentation Engineering and five postgraduate courses namely M.Tech in Power System Engineering, VLSI Systems, Computer Science and Engineering, Electronics and Communication Engineering & M.Sc. in Physics, inclusive of PhD studies.

ATAL Academy

AICTE Training and Learning (ATAL) Academy is established with the vision “To empower faculty to achieve goals of Higher Education such as access, equity and quality”. AICTE is committed for development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development. Council understand that there is a need of the day to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines. Training is required for increasing the knowledge and skills of faculties and students to make them more employable to acquire global competencies.

About the Department

The Department of Computer Science and Engineering is Research-oriented but at the same time Student-centered Department. The primary motto of the department is to provide high quality education. The department strives to inculcate conceptual and technical skills in students through a modern scientific teaching methodology. The laboratory exercises are designed to implement the latest software and tools of the industry. The Department will continue to develop and administer programs which serve the needs of industrial computer scientists, researchers, and computer application specialists for whom the discipline of computing sciences provides indispensable tools. The department offers Under Graduate, Post Graduate and PhD programmes.

Resource Person

Resource Persons from Government Organizations, NITs, and Industry with rich experience in Teaching, Research and Laboratory development will be handling the sessions.

Organizing Committee

Dr. Themrichon Tuithung, Prof, CSE, NIT Nagaland
Dr. ShouvikDey, AP, CSE, NIT Nagaland
Dr. Arambam Neelima, AP, CSE, NIT Nagaland
Dr. Nagaraju Baydeti, AP, CSE, NIT Nagaland
Dr. Dilwar Hussian. Mazumder, AP, CSE, NIT Nagaland
Dr. Sibesh Lodh, AP, CSE, NIT Nagaland

Instruction

- There is **No Registration Fee**.
- Not more than 10% of the participants from Host Institution.
- Participant will be selected on first come first basis.
- Total number of participants for the program is 50.
- Only online ATAL Portal Registration.

Registration Link

<https://www.aicte-india.org/atal>

Contact us

For any Technical clarifications, please contact:

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Schedule: AICTE Training and Learning Academy (ATAL)

Blended / Hybrid mode Two Weeks FDP on- “RECENT TRENDS IN AI AND MACHINE LEARNING TECHNIQUES APPLICATIONS

PERSPECTIVES

WEEK -1 (On-Line)

Date	5.00 PM to 5.50 PM	6.00 PM to 6.50 PM	7:00 PM to 7.30 PM
13-02-2023	Introduction to AI, ML and DL	Applications Perspectives	Interactions
14-02-2023	Data Preprocessing	Feature Selection and Extraction	Interactions
15-02-2023	Optimization and Regularization	Supervised Learning and Its Applications	Interactions
16-02-2023	Ensemble Learning (EL)	EL –Applications Perspectives	Interactions
17-02-2023	Unsupervised Learning and its Applications	Reinforcement Learning & its Applications	Interactions
18-02-2023	Image and Video Analytics	Case Studies of AI, ML and DL Applications	Week 1 MCQs

WEEK – 2 - (Off-Line)

Date	9.30 AM - 12.00 PM	12.00 - 1.00 PM	1.00 – 2.00 PM	2.00 – 4.30 PM	4.30 – 5.00 PM
20-02-2023	Inauguration; Data Analysis & Visualization using Python	Lunch	Industrial Visit		
21-02-2023	Steps for building a Machine Learning Models	Article 1 Discussion [1_Machine Learning: Algorithms, Real-World Applications and Research Directions]	Lunch	Hands-On Supervised algorithms	Teaching Practice
22-02-2023	Federated Learning	Article 2 Discussion [2_Deep Networks for Decentralized Data]	Lunch	Hands-On Setting Environment for Federated Learning	Teaching Practice
23-02-2023	Hands-On RNN and LSTMs	MCQs	Lunch	Customizing Models and Training with TensorFlow	Teaching Practice
24-02-2023	Yoga & Meditation	Visit Report (Team)	Lunch	Reflection Journal	Feedback + Valedictory

“By Learning You Will Teach; by Teaching You Will Learn....”