



AICTE – Training and Learning (ATAL) Academy

ATAL's Continuous Professional Development Program (CPDP)
/Faculty Development Program 2022-23

on

Advances in Artificial Intelligence

October 31 - November 11, 2022



Organized by

Computer Vision and Biometrics Lab
Department of Information Technology
Indian Institute of Information Technology Allahabad
Prayagraj – 211015, India

www.iiita.ac.in

About AICTE's ATAL Programme

AICTE Training and Learning (ATAL) Programme is an initiative by AICTE which aims at empowering faculty to achieve goals of Higher Education such as access, equity and quality. This Programme is designed to fulfil the need to train the young generation in skill sector and having faculty & technicians to be trained in their respective disciplines. It was felt that Training with latest tools and technologies is vital to keeping an institute competitive and more productive. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. It also transforms them to harmonize with society and most importantly to make them a good citizen of the country.

Objective of ATAL Academy:

- To set up an Academy which will plan and help in imparting quality technical education in the country
- To support technical institutions in fostering research, innovation and entrepreneurship through training
- To stress upon empowering technical teachers & technicians using Information & Communication Technology
- To utilize SWAYAM platform and other resource for the delivery of trainings.
- To provide a variety of opportunities for training and exchange of experiences. Such as workshops, Orientations, learning communities, peer mentoring and other faculty development programs.
- To support policy makers for incorporating training as per requirements

About Indian Institute of Information Technology Allahabad (IIIT-A)

Indian Institute of Information Technology Allahabad is a premier IIIT in India. IIIT-A was established in 1999, as a center of excellence in Information Technology (IT) and allied areas. The Institute was conferred the "Deemed University" status by the Government of India in the year 2000. It was declared as an "Institute of National Importance" by the Act of the Parliament, Govt. of India in 2014. The Institute has been conceived with the objective of developing professional expertise and skilled manpower in IT and areas of allied research. As an apex institute in the area of IT, IIIT-A has been contributing towards strengthening the indigenous capability necessary for exploiting profitably and harnessing multi-dimensional facets of IT and allied areas at all levels, and attaining expertise to enable the country to emerge as a leading player in the global arena.

Course Content

Introduction to Artificial intelligence, Machine Learning, Deep Learning, and Computer Vision. Applications of AI in Computer Vision, Biometrics, Healthcare, Natural Language Processing, Image Retrieval, Robotics, Internet of Things, Security and Surveillance, etc.

Objective

1. To learn about AI and Deep Learning Architectures
2. To study the applications of AI and deep learning in robotics, computer vision, clustering, IoT, NLP, Telcom and Biometrics
3. Hands-on sessions for practical awareness

Target Audience

Associate Professors / Assistant Professors / Ph.D. scholars / PG students

Mode

Blended/Hybrid: Online (WebEx/Google Meet) for theory and offline for practical/labs/ experiential learning.

How to Register

No registration fee will be charged from the participants. Registration for the program will be over ATAL portal.

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

Resource Persons



Prof. G. C. Nandi
IIIT Allahabad



Prof. Shekhar Verma
IIIT Allahabad



Prof. Rajeev Srivastava
IIT-BHU



Prof. Sanjay Kumar Singh
IIT-BHU



Prof. Ashish Khare
J. K. Institute of Applied
Physics & Technology,
University of Allahabad



Prof. Pavan Chakraborty
IIIT Allahabad



Prof. Pritee Khanna IIITDM
Jabalpur



Mr. Akhilesh Kumar
Scientist E, DIPR, DRDO



Dr. Sumit Soman
Senior Data Scientist,
Ericsson Global AI
Accelerator



Dr. K. P. Singh
IIIT Allahabad



Dr. Angshul Majumdar
IIIT Delhi



Dr. Akhilesh Tiwari
IIIT Allahabad



Dr. Vibhor Kant
BHU Varanasi



Dr. Mitu Mandal
MNNIT Allahabad



Dr. Pragya Singh
IIIT Allahabad



Dr. Shiv Ram Dubey
IIIT Allahabad



Dr. M. Javed
IIIT Allahabad



Dr. Anjali Gautam
IIIT Allahabad



Dr. Satish Kumar Singh
IIIT Allahabad



Dr. Navjot Singh IIIT
Allahabad

Schedule

BASIC AICTE ATAL FDP/CPDP Week 1 – Online (07:00 PM – 09:30 PM)

	07:00 PM – 07:50 PM	08:00 PM – 08:50 PM	09:00 PM – 09:30 PM
Day 1 (31.10.2022)	Session 1 (I) ML and Deep Learning Applications in Computer Vision by Prof. Rajeev Srivastava (IIT-BHU)	Session 1 (II) ML and Deep Learning Applications in Computer Vision by Prof. Rajeev Srivastava (IIT-BHU)	Session 1 Interactions
Day 2 (01.11.2022)	Session 2 (I) IoT-Based Data Analytics by Prof. Sanjay Kumar Singh (IIT-BHU)	Session 2 (II) IoT-Based Data Analytics by Prof. Sanjay Kumar Singh (IIT-BHU)	Session 2 Interactions
Day 3 (02.11.2022)	Session 3 (I) Salient Object Detection: Traditional vs Deep Learning Methods by Dr. Navjot Singh (IIIT Allahabad)	Session 3 (I) Salient Object Detection: Traditional vs Deep Learning Methods by Dr. Navjot Singh (IIIT Allahabad)	Session 3 Interactions
Day 4 (03.11.2022)	Session 4 (I) Emerging ML Methods and Applications in Telecom by Dr. Sumit Soman (Ericsson Global AI Accelerator)	Session 4 (II) Emerging ML Methods and Applications in Telecom by Dr. Sumit Soman (Ericsson Global AI Accelerator)	Session 4 Interactions
Day 5 (04.11.2022)	Session 5 (I) AI in Biometrics by Prof. Pritee Khanna (IIITDM Jabalpur)	Session 5 (II) AI in Biometrics by Prof. Pritee Khanna (IIITDM Jabalpur)	Session 5 Interactions
Day 6 (05.11.2022)	Session 6 (I) Deep Learning based Clustering by Dr. Angshul Majumdar (IIIT Delhi)	Session 6 (II) Deep Learning based Clustering by Dr. Angshul Majumdar (IIIT Delhi)	Week 1 MCQs

Week 2 – Offline (9:30 am – 4:30 pm)

*Day 1 (07.11.2022)	Day 2 (08.11.2022)	Day 3 (09.11.2022)	Day 4 (10.11.2022)	Day 5 (11.11.2022)
9:00 – 9:30 Inauguration	9:30 – 12:00 Session 8 Safe AI by Dr. K. P. Singh (IIIT Allahabad)	9:30 – 12:00 Session 10 Applications of Fuzzy Sets and Genetic Algorithms in Recommender Systems by Dr. Vibhor Kant (BHU Varanasi)	9:30 – 12:00 Session 12 Emerging Transformers in Deep Learning by Mr. Akhilesh Kumar (Scientist E, DIPR, DRDO)	9:30 – 12:00 Session 14 Special Sessions*
9:30 – 12:00 Session 7 AI in Robotics by Prof. G. C. Nandi (IIIT Allahabad)	12:00 – 1:00 Article 1 Discussion	12:00 – 1:00 Article 2 Discussion	12:00 – 1:00 More Hands-on session	12:00 – 1:00 Reflection Journal (Individual) and Visit Report (Team)
12:00 – 1:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch
1:00 – 2:00 Travel for Visit	2:00 – 4:30 Session 9 Interpretability in Machine Learning by Prof. Shekhar Verma (IIIT Allahabad)	2:00 – 4:30 Session 11 AI in Computer Vision by Prof. Ashish Khare (J. K. Institute of Applied Physics & Technology, University of Allahabad)	2:00 – 4:30 Session 13 Generative Model in AI By Dr. Shiv Ram Dubey (IIIT Allahabad)	2:00 – 3:00 MCQs
2:00 – 4:00 Visit: Center of Intelligent Robotics (Robita), IITA	4:30 – 5:00 Teaching Practice Dr. Anjali Gautam (IIIT Allahabad)	4:30 – 5:00 Teaching Practice Dr. M. Javed (IIIT Allahabad)	4:30 – 5:00 Teaching Practice Dr. Shiv Ram Dubey (IIIT Allahabad)	3:00 – 4:00 Feedback
4:00 – 5:00 Travel back				4:00 – 5:00 Valedictory

***Special Sessions**

- Part I – 09:30 AM to 10:00 AM (National Education Policy (NEP) 2020 Implementation) by Dr. Akhilesh Tiwari, IITA
 Part II – 10:00 AM to 10:30 AM (Indian values & ethos, Classroom conduct & behaviour (teaching learning psychology)) by
 Dr. Mitu Mandal, MNNITA
 Part III – 10:30 AM to 11:00 AM (Life Skills such as time and stress management) by Dr. Pragya Singh, IITA
 Part IV – 11:00 AM to 11:30 AM (Research Methodology) by Prof. Pavan Chakraborty, IITA
 Panel Discussion - 11:30 AM to 12:00 Noon

Organizing Committee



Prof. R. S. Verma
Patron
Director (Acting), IIT Allahabad

FDP Coordinators



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