One Week Online Short-Term Course

on

Artificial Intelligence for Next Generation IoT Networks

11th to 15th Sept 2023

Organized by:

Department of Information Technology

Dr B R Ambedkar National Institute of Technology Jalandhar
Grand Trunk Road, Amritsar Bypass,
Jalandhar, Punjab 144008

ABOUT NIT JALANDHAR

Dr B R Ambedkar National Institute of Technology was established in the year 1987 as Regional Engineering College and was given the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. Now the Ministry of Human Resource Development, Government of India has declared the Institute as "Institute of National Importance" under the act of Parliament-2007. A large number of reputed Industrial houses in the country visit the Institution and select the final year students as Engineers/ Management Trainees. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers BTech, MTech, MSc, MBA and PhD programmes in the several disciplines of Engineering, Technology and Sciences.
For more info: http://www.nitj.ac.in

ABOUT IT DEPARTMENT

Striding ahead with the vision and mission of the Institute and continuing forward the objectives, each department frames its own vision and mission. Our department looks forward its *Vision* as follows:

- To be the frontier of Computer Science and Engineering and to produce globally competent graduates with high moral values committed to build a vibrant nation.
- To be recognised nationally and internationally for delivering outstanding computer science education and conducting research of high distinction, both of value and relevance to the communities we serve.

While we are striving hard to achieve the vision, the *Mission* of the department which is assisting in the process tends to have:

- A strong theoretical excellence and competence in the fundamental areas of Information Technology to nurture students for utilizing high creativity, innovation and out-of-the-box thinking.
- A breadth of knowledge in a variety of application areas pertaining to the field of Computer Science so that students can maximize their career options.
- Preparation for contemporary research and development in Computer Science application areas for industry or academia.
- The awareness of professional, social and ethical responsibilities through curricular, co-curricular and extracurricular activities.

ABOUT THE SHORT-TERM COURSE (STC)

An intensive One-week STC is being organized for faculty, research scholars of engineering and technological institutions. It is also open to persons hailing from the industry. The objective of this STC is to present a clear understanding of todays' technologies based on Next Generation Internet of Things (IoT) Networks. It brings together thrust technologies like Cloud Computing, Edge computing, Artificial Intelligence, Blockchain, 5G, Machine Learning, Autonomous systems, and cybersecurity etc. These next Generation IoT systems with embedded intelligence, hyperconnectivity and AI based approach shifting data processing to network edge from cloud platform for latency-based applications. The complex and massive IoT data cannot be processed by the low computing power IoT devices and need the high-end computing platform i.e., cloud paradigm. The network connectivity and communication delay play a vital role in IoT based applications that increases the necessity of 5G technology. Dynamic interactive sessions with prominent experts will be conducted in different domains of research such as Cloud Computing and its Services, Fog/Edge Computing and its Applications, Internet-of-Things, Blockchain, Artificial Intelligence and many more. The technical program will include state-of-the-art seminars,

discussion/presentation sessions, signifying the Research challenges, insights and practical learning through Hands-on sessions on aforementioned research areas.

The participants from academics/industry will be benefited immensely and this course will be a guiding light to learn and carry out research activities. This STC aims to impart knowledge to the participants pertaining to theoretical as well as analytical treatment to existing problems.

The STC will equip the participants to develop a smart system incorporating the thrust areas and will make them well versed with various application areas that may ease day to day and real-life activities. The participant will adopt new trends of accessing and retrieving data along with analyzing it from a remote location. The objective of this STC is to hone the skills of researchers and practitioners from academia and industry to gain insights with the existing research developments and challenges, along with practical exposure to effective smart systems, tools, and related applications.

SHORT TERM COURSE CONTENT

Expert lectures and extensive hands-on sessions cover following topics:

- *Artificial Intelligence*
- *Cloud Computing and its Services*
- *Fog/Edge Computing and its Applications*
- *IoT Architecture and Protocols*
- *Machine Learning APIs in Cloud*
- *Blockchain*
- *Industry 4.0*
- *Smart e-Healthcare & Agriculture*
- *Federated Machine learning*
- *AI enabled emerging technologies*
- *Python programming for ML*

PATRON

Prof. (Dr.) Binod Kumar Kanaujia
Director, NIT Jalandhar

CONVENERS

Dr. Vijay Kumar
Dr. Mohit Kumar

CO-ORDINATORS

Dr Nisha Chourasia
Dr. Avani Vyas
Dr. Naveen Gupta

ORGANISING COMMITTEE

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Dr Aruna Malik
Dr Amritpal Singh
Dr Prashant Kumar
Dr Kunwar pal
Dr. Lalatendu Behera

RESOURCE PERSONS

Eminent academicians affiliated to IITs, IIITs, NITs, other renowned institutes and Industry experts will deliver the sessions with practical demonstrations.

HOW TO APPLY

Registration can be done using the link below:
https://www.nitj.ac.in/events_registration/stc_aingin/login

Expected Audience: Industry Personnel, Faculty, Research Scholars.

Registration fees:

Faculty, Research Scholar and Industry Participants	Rs. 500+18%GST
NITJ Faculty, Research Scholars, PG students	300/-

Last date of Registration: 07th Sept 2023
Certificate of participation will be provided online.

For any query, contact:

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