Indian Institute of Information Technology Kottayam

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ATAL-AICTE SPONSORED

FIVE DAY ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

"MACHINE LEARNING ALGORITHMS AND APPLICATIONS"

4-8 NOVEMBER 2020

SUPPORTED BY:

About the Institute

Indian Institute of Information Technology, Kottayam at Valavoor, Pala, Kerala is one among the IIITs that have been established as "Institutions of National Importance" by MHRD Govt. of India under the ambit of IIIT (PPP) Act 2017. IIIT Kottayam campus is situated at Valavoor, Pala, Kottayam - a picturous location, spread over in 53 acres of land - allotted by Govt. of Kerala in the southern part of the state commonly referred to as God's Own Country. The institute offers 4 year B.Tech and B.Tech (Hons) program with specialized courses covering all major research domains of computer science and engineering, viz Data Science, Cloud Computing, Artificial Intelligence, Machine Learning, Parallel Computing, HPC, Programmimg Languages, Bi Informatics and so forth. The students are admitted against the JoSAA/CSAB counselling against the JEE main rank list. In addition, Institute also offers Ph.D programs in CSE, ECE and Mathematics as well as MTech in AI & Data Science for the working professionals.

About the Department

Department of Computer Science and Engineering is the only academic department operating in the institute. It offers a B.Tech Programme in Computer Science and Engineering and an Executive M.Tech programme in AI & Data Science for working professionals at its extension center at Trivandrum. Ph.D. admission started in 2017 at the institute and there are about 20 scholar currently pursuing their research degree.

About the FDP

This five-day Faculty Development Programme on "Machine learning algorithms and applications" is targeted to provide an introductory overview of the theoretical aspects and scientific applications of the machine and deep learning concepts in the contemporary world. The objectives of the course are:

- To provide extensive exposure to various machine learning algorithms and their applications in various fields of science and Engineering.
- To provide a theoretical introduction to Machine Learning Architecture.
- To enhance the research collaboration among various participants from different institutes and provide a platform for sharing their knowledge to improve the collaboration in future research endeavours.
- To facilitate joint research initiatives between the resource persons and participants.

The topic "machine learning" has captured the attention of many scientists and engineers across the globe working in various disciplines due to its inherent applications and power in making the analysis and diagnosis pretty simple and accurate. The machine learning algorithms ensure minimal manual intervention to the systems thereby reducing manual errors and improving accuracy. Many well-known systems are powered by machine learning algorithms. Machine learning becomes inevitable when dealing with big data from various applications. As the amount of data increases, the manual analysis becomes impossible and highly inaccurate. Many systems require precision in the analysis so as to make appropriate decisions at required circumstances. Therefore, the field of machine learning has been explored in various application domains. This course is highly relevant and contemporary in the current research world. The course contains approximately 10 hours of theoretical lectures and 4 hours of practical sessions to give an overview of the topic. The participants from various disciplines such as computer science, electronics communication, electrical engineering, and mathematics are expected to participate in the workshop.

The targeted audiences are faculty and research scholars of various institutes across the country. The lectures are organized in such a way that the topics will be presented to the audience so that everyone can comprehend and appreciate the contents. Since it is intended for a group of the multidisciplinary audience, all topics will cover the basics needed to understand the concepts. Resource persons from reputed institutes like NITs, CET, IIIT will deliver lectures regarding the topic. The practical session will provide a hands-on experience to the participants. Some of the algorithms presented during the theoretical sessions will be demonstrated during the hands-on session. In a nutshell, the course will have a larger reach and higher impact on the research community working on Machine and deep learning applications in various fields of science and engineering. The participants will be equipped to handle such courses at various other institutes to enlighten a larger group thereby spreading the knowledge and expertise shared by the experts of the course to a larger audience.

Targeted Participants

Maximum number : 150
Faculty members from Institutes/ colleges/ university departments who are teaching UG/PG science and engineering and a few research scholars. If the number of applicants exceeds the maximum number, then selection will be based on the specialization and research interest of the applicants.

Registration

The participants will not be charged any fee to attend the FDP programmme. However, the selected candidates should register by filling and sending the scan-copy of registration form in the format given in the last page of this brochure. The handouts and FDP materials will be distributed/circulated among the participants.
For pre-registration please visit ATAL website. https://aicte-india.org/atal

Selection:

The selected participants will be intimated through e-mail/ATALAccount. The meeting invitation mail will be sent to the registered email id. The FDP will be fully conducted online and the platform for the same will be communicated in due course.

Test and evaluation

There will be an evaluation test on the last day of the FDP to assess the depth of understanding of the FDP contents by the participants. The attendance in the test is mandatory to receive the participation certificate.

Attendance

The participants are expected to attend all sessions without fail. Those who fail to secure 80% attendance in the sessions will not receive the participation certificate.

Resource Persons:

Experienced faculty members from reputed academic institutes and experts from industry will handle the sessions. The list of experts will be updated soon. A detailed programme schedule will be informed in due course.

For any further clarification please contact:

The **Coordinator** of the FDP:

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