ABOUT THE STTP

Machine Learning (ML) plays a significant role in the modern engineering and information processing systems. Increasing bulks and diversities of accessible data, computational processing that is inexpensive and more powerful, affordable data storage and complex nature of applications are responsible for resurging interest in machine learning and then deep learning

Highly experienced and renowned experts from IITs, recognized universities and industries will be invited and will deliver lectures and practical sessions on Machine Learning and its applications. This course will provide an exciting/practical way for research scholars, and practitioners including faculty members to either brush up on their skills for innovation in machine learning or create a foundation for future use in innovation in machine learning area.

Topics to be covered during proposed STTP are as follows:

- Introduction to Machine Learning (ML) and Outline of Big Data analytics.
- Types of classification, supervised and un-supervised learning.
- Applications in data mining and pattern recognition.
- Shallow and Deep Learning and its application.
- Genetic Algorithms, Optimization techniques-PSO,DE and their Applications,
- Evaluation of learning algorithms.
- Industry viewpoint on Artificial Intelligence.
- Big Data Analytics with machine learning and data analysis tools.
- Application of Machine Learning in Engineering and automation.
- Arduino and Raspberry PI based automation design.
- Hands-on training on latest open source machine learning tools.

OBJECTIVES

Machine Learning and Big Data Analysis are both evolutionary fields of computing and the developments in these fields are complementing each other. The ever changing data landscape in modern digital world has resulted in newer ways of data processing frameworks in order to get meaningful insights which are unprecedented.

In this context the primary objective of the proposed STTP is to disseminate and promulgate the basic ideas and research directions among young Research personals/Academicians/Ph.D. and M. Tech. scholars about machine learning techniques and its various application for solving engineering problems. Besides this the proposed STTP has following objectives:-

- To familiarize several fundamental concepts and methods of machine learning.
- To introduce the participants with few basic learning algorithms and techniques and their applications.
- To develop skills of using latest machine learning software and algorithms for solving engineering problems.
- To learn approaches and tools to apply machine learning algorithms to explore and analyze real data.
- To gain experience of doing independent study and research in the area of machine learning.
- To learn the basics of Big Data Analytics Concepts, Data preparation – merging, managing missing numbers sampling, Data visualization, Basic statistics.
- To familiarize the audience with tools for Big Data Analytics.
- To familiarize the participants how machine learning thrives on growing data sets.
- To learn tools and algorithms for creating machine learning models that learn from data and to scale those models up to big data problems.

EXPECTED OUTCOME

By the end of the proposed STTP the participants will be able to:-

- Recognize the type of machine learning problem and to apply the appropriate set of techniques.
- Understand a wide variety of machine learning algorithms to frame data models.
- Know how to apply a variety of machine learning tools for handling data effectively.
- Understand how to perform evaluation of learning algorithms.
- Know the basics of Big Data Analytics.
- Know how to apply a variety of data analytical tools.
- Construct models that can be learned from data using available open source tools.
- Analyze big data problems using scalable machine learning algorithms.
- Broad opportunities for automation with machine learning.

JODHPUR INSTITUTE OF ENGINEERING AND TECHNOLOGY

AICTE
Sponsored

Online 6 Days
Short Term Training Program (STTP)

On

MACHINE LEARNING AND IT'S APPLICATION TO BIG DATA

(14-19 September, 2020)

Phase - I

Organized By :

DEPARTMENT OF ELECTRICAL ENGINEERING, JIET

Address :

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ABOUT THE AICTE

In accordance with the provisions of the AICTE Act (1987), for the first five years after its inception in 1988, the Minister for Human Resource Development, the Government of India, was the Chairman of the Council. The first full-time Chairman was appointed on July 2, 1993 and the Council was reconstituted in March 1994 with a term of three years. The Executive Committee was re- constituted on July 7, 1994 and All India Board of Studies and Advisory Boards were constituted in 1994-95. Regional Offices of the Ministry of Human Resource Development, the Government of India, located in Kolkata, Chennai, Kanpur, and Mumbai were transferred to AICTE and the staff working in these offices were also deputed to the Council on Foreign Service terms w. e. f. October 1, 1995. These offices functioned as secretariats of regional Committees in the four regions (North, East, West and South). Three new regional Committees in southwest, central, and northwest regions with their secretariats located in Bangalore Bhopal, and Chandigarh, respectively, were also established on July 27, 1994. One more regional committee in South-Central region with its Secretariat in Hyderabad was notified on March 8, 2007.

ABOUT THE JIET

Jodhpur Institute of Engineering and Technology (JIET) is an esteemed and prestigious institution of Engineering and Management in Rajasthan, devoted to cause of promoting technical and scientific literacy and temperament in the young inquisitive minds right from its inception in 2003. The multi-disciplinary campus JIET is a trustworthy name in the Rajasthan as it provides multiple opportunities of gaining insights in professional education through the availability of resources.
The institute is recognized by AICTE, New Delhi and affiliated with Bikaner Technical University, Bikaner. It is the only engineering institution in Western Rajasthan having NBA Accreditation in four UG programs since 2011 (three times in a row). Furthermore, JIET is only engineering college of Rajasthan Accredited by NAAC with 'A' Grade. JIET has been Ranked first in state by the affiliating university continuously two times in a row (Session 2018-19 and 2019-20).

The institute also has UGC recognition under Section 2(f). The institute runs six UG programmes, five PG programmes. JIET is also the Approved Research Centre (Ph.D.) of University in four disciplines.
Apart from the regular curriculum, for the holistic development of the students, the institution has the provision of extracurricular and co-curricular activities through various students clubs and collaborative programmes.

RESOURCE PERSONS

- Prof. (Dr.) Nishchal K Verma, Professor, IIT-Kanpur
- Prof. (Dr.) Gaurav Harit, Associate Professor, IIT-Jodhpur
- Prof. (Dr.) Ujjwal Kumar Kalla, Associate Professor, MANIT, Bhopal
- Prof. (Dr.) Jagdish Chand Bansal , Associate Professor , South Asian University, New Delhi
- Prof. (Dr.) Harish Sharma, Associate Professor, RTU, Kota
- Prof. (Dr.) KR Chowdhary , Ex-Professor, MBM Engg. college, Jodhpur
- Prof. (Dr.) Avdhesh Sharma Ex-Professor, MBM Engg. college, Jodhpur
- Prof. (Dr.) Jayashri Vajpai - Professor, MBM Engg. college, Jodhpur
- Prof. (Dr.) Akhil Ranjan Garg Professor, MBM Engg. college, Jodhpur
- Prof. (Dr.) Praveen Kumar Shukla, Professor, BBD University, Lucknow
- Er. KapilPanwar, Data Scientist, Mahendra Teqo Pvt. Ltd, Bangalore
- Er. Shubham Sharma, CEO, Techno Master Pvt, Ltd. , Jodhpur

ABOUT THE DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering has come a long way since its establishment in JIET in 2003. It is one of the four pioneer branches with an annual intake of 120 students. The department has state-of-art laboratories that provide practical insight of the theoretical aspects covered in the lectures.
Department of Electrical Engineering is one of the NBA accredited department since 2011. Department has an undergraduate program in Electrical Engg., a postgraduate course in power systems program. Department is also an authorised research centre affiliated to Rajasthan Technical University, Kota.

TARGET AUDIENCE

This course is open to Faculty members of AICTE affiliated Engineering Institutions, who wish to learn about latest technology in Machine Learning.

NO REGISTRATION FEES

Note : The Mode of STTP is online platform. After the registration Join Whatsapp group for all details related to STTP.

*Hands on Practice (Lab session) will be conducted using Python.

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Prof. & Head (EE), JIET, Jodhpur

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- Mr. Ravi Soni
- Mr. Amit Singhal
- Mr. Ajay Kushwaha

Note : Submit the Registration Form through Online Process via :

https://forms.gle/MS5yL6xjcPUKvqfE6

e-Certificate

will be provided to Participants, whose attendance is above **80%**.