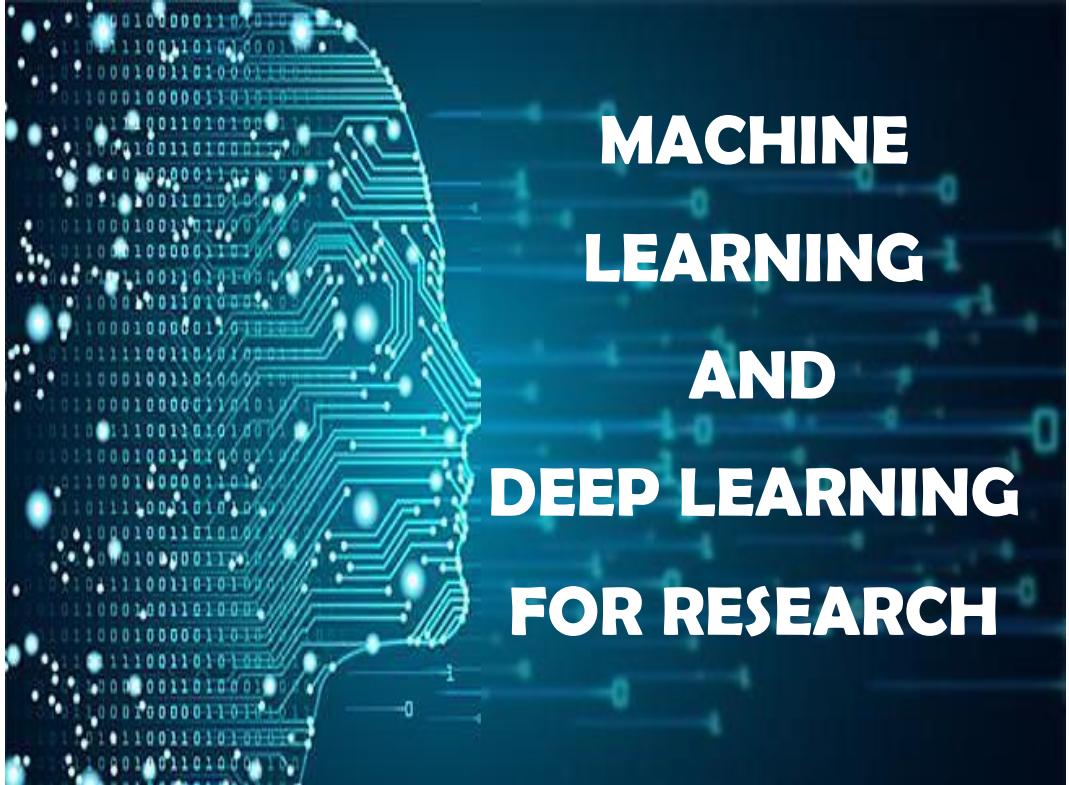




Dr B R Ambedkar

National Institute of Technology

Jalandhar - 144011



**MACHINE  
LEARNING  
AND  
DEEP LEARNING  
FOR RESEARCH**

**Two Weeks Short Term Course**

**(01<sup>st</sup> – 15<sup>th</sup> November, 2021)**

**ONLINE**

*Organized by :*

**Centre for Continuing Education**

# INTRODUCTION OF THE PROGRAM



**Machine learning (ML)** is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so. Machine learning algorithms use historical data as input to predict new output values.

Recommendation engines are a common use case for machine learning. Other popular uses include fraud detection, spam filtering, malware threat detection, business process automation (BPA) and predictive maintenance.

**Deep Learning**, on the other hand, is just a type of Machine Learning, inspired by the structure of a human brain. Deep learning algorithms attempt to draw similar conclusions as humans would by continually analyzing data with a given logical structure. To achieve this, deep learning uses a multi-layered structure of algorithms called neural networks.

Deep learning drives many artificial intelligence (AI) applications and services that improve automation, performing analytical and physical tasks without human intervention. Deep learning technology lies behind everyday products and services (such as digital assistants, voice-enabled TV remotes, and credit card fraud detection) as well as emerging technologies (such as self-driving cars).

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## CONTENTS TO BE COVERED

This short term course will cover the following contents during the period of two weeks:

- **Artificial Intelligence and Research Domain**
- **Machine Learning Vs. Deep Learning**
- **R Programming for Statistical Computing and Machine Learning based Intelligent Applications**
- **Python Packages for Machine Learning and Deep Learning**
- **Analyzing Real Time Streaming Data, Text Mining and Sentiment Analysis**
- **Bio Informatics Data Analysis using Machine Learning**
- **Machine Learning in Internet of Things and Cloud Computing**
- **Working with OpenCV for Computer Vision**
- **Neural Network and its Association with Machine Learning**
- **Free and Open Source Tools for Machine Learning and Deep Learning**
- **Python Programming for Machine Learning and Deep Learning**
- **Implementation of Statistical Methods and Machine Learning Approaches**
- **Data Exploration and Visualization**
- **Convolutional Networks and High Performance Application**
- **Integrating Machine Learning for Image and Video Processing**

## **PARTICIPANT'S PROFILE**

- Students / Research Scholars from Academic Institutions
- Professors/ Assistant Professors/ Associate Professors/ others from Educational Institutes/ University
- Professionals to enhance more knowledge in this field.

## DATE, TIME & MODE

DATE	:	<u>01<sup>st</sup> – 15<sup>th</sup> November, 2021</u> (Two Weeks)
TIME:	:	<u>06:00pm – 08:00pm</u> (2 hours per day)
MODE OF LECTURE	:	<u>Online</u>

## IMPORTANT DATES

Registration Opens	:	11.10.2021
Registration Closes	:	30.10.2021
Commencement of Course	:	01.11.2021
Course Ends	:	15.11.2021

## REGISTRATION FEE

Sr No.	Registration Type	Registration Fee (₹)*
1.	Students	1000
2.	Research Scholars	1500
3.	Faculty/Professionals	2000

\*(GST @18% is applicable for external candidates)

## REGISTRATION AND PAYMENT LINK

Click below for the registration and payment link:

**[CLICK ME TO JOIN THE COURSE](#)**

## INSTRUCTIONS

- Participants have to attend all the online lectures, Q& A and the hands on session through Google Meet.
- It is mandatory to fill the attendance daily
- The participants have to do self-practice by themselves. Mentors will be available to solve the queries and provide assistance during practice.
- Feel free to contact us at : [stc@nitj.ac.in](mailto:stc@nitj.ac.in)

## **CERTIFICATION**

**E-Certificates will be issued by NIT Jalandhar to those participants who have attended the program with minimum 90% attendance and scores minimum 60% marks in the test conducted at the end of the online Short Term Course.**

## **ABOUT DR B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY, JALANDHAR, PUNJAB**



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. 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.

## **ABOUT CENTRE FOR CONTINUING EDUCATION**

(CCE) is established in the Institute to cater the need of the society. The Centre will provide a multidisciplinary platform for policy discourse. This will bring researches, practitioners and interested members of our community together in order such burning issues.

The Centre will cover the wide range of short and long-term program to be offered to all citizens of India and Abroad.

## **COORDINATORS**

Dr S K Mishra

Dr Prashant Kumar

**For Any Query, Email us at : [stc@nitj.ac.in](mailto:stc@nitj.ac.in)**

**Dr Prashant Kumar : +91-8351976199**