



# THE CENTRE FOR ENTREPRENEURSHIP DEVELOPMENT

(A Govt. of Gujarat Organization)

Funded Anchor Institute

**Dhirubhai Ambani Institute of  
Information and Communication Technology**



ENGINEERS WITH  
SOCIAL RESPONSIBILITY

## ONLINE CERTIFICATE COURSE ON “INTRODUCTION TO ML WITH PYTHON”

(Under the Anchor Institute Program)

### About the Course:

This course is to familiarize the participants with the basic concepts of machine learning along with relevant fundamentals of probability theory, random variables, matrix computations, and optimization. Since we deal with images too often, a few concepts of digital image processing will also be discussed, along with some hands-on experiments. The evolution of deep neural networks (DNN) makes it necessary to understand the fundamental concepts behind different architectures, which will be discussed after the classical techniques of machine learning. Towards the end of this course, adversarial machine learning will be introduced.

### Funded by:

The Centre for Entrepreneurship Development (CED)  
A Govt. of Gujarat Organisation <https://ced.gujarat.gov.in/>

### Organized by:

Dhirubhai Ambani Institute of Information and Communication  
Technology, Gandhinagar, Gujarat, India

**More Details:** <https://www.daiict.ac.in/courses-through-aip-cep#tab-2>

**Tentative Launch Date:** 15<sup>th</sup> December 2023

The course will be conducted on weekends, specifically on Friday and Saturday evenings. Detailed timing information will be shared at a later date

**Targeted Audience:** (Intake 40 Seats)

Faculty, Professionals, PG Students, Senior UG Students

**Course Duration:** 40 Hours (22 Hours of Theory & 18 Hours of Lab)

**Mode:** Online

### Topics to be Covered:

The course will cover the broad spectrum of the following six modules:

- |                                            |                         |
|--------------------------------------------|-------------------------|
| - Mathematical Preliminaries               | - Unsupervised Learning |
| - Introduction to Digital Image Processing | - Deep Neural Networks  |
| - Supervised Learning                      | - Adversarial ML        |

### The Expected Outcome of Course:

After completion of this course, the participants will be aware of different machine learning techniques and deep learning architectures along with their mathematical concepts. The discussion on digital image processing concepts will make the participants understand the importance of processing visual data and the techniques to do so. Further, the introduction of adversarial machine learning will make the participants understand the threat posed by adversarial attacks.

### About DA-IICT Gandhinagar

DA-IICT is a university devoted to the field of Information and Communication Technology (ICT). The institute is spread over 50 acres of land in Gandhinagar, the capital city of Gujarat and has a lush green campus. Established in 2001 by the Reliance Group, DA-IICT is consistently ranked as one of the top technological institutes in the country. DA-IICT has been accredited with an 'A+' grade by NAAC and 'Centre of Excellence' by the Government of Gujarat. The institute has established several research collaborations with different universities, government organizations, and research labs, industries both in India and abroad. The students along with the faculties publish their research articles in several national/international Book Chapters, Journals and Conferences of repute. The institute has state-of-the-art research labs and super-computing facilities. The students organize and participate in several technical, cultural and sports events throughout the year. The institute possesses a vast well-established alumni group.

For more details, please visit <https://www.daiict.ac.in/>

### Registration: FREE

Sponsored by the (CED, Govt. of Guj.) under DA-IICT AIP Program

### Course Fee (Pay Online):

Participants are charged a **fully refundable** upfront course fee of 5,000 INR.

**Refund Policy:** Maintain a 75% minimum attendance to be eligible for the refund.

### Pay Online

**Name:** M/S. Dhirubhai Ambani Inst of Infor & Comm Technology Anchor In  
**Bank:** ICICI Bank Ltd.

**Account Number:** 016501021384

**IFSC Code:** ICIC0000165

Registration on the following link after the payment:

Registration Link: <https://forms.gle/EQoVFQXoTTcP7RoH7>



The last day of registration is 30<sup>th</sup> November 2023

### Limited Seats - Act Quickly!

Please note that our course is available on a first-come, first-served basis due to limited seat availability, in adherence to government regulations. We encourage you to secure your spot by registering before the deadline.

**Certificates:** A participation certificate will be conferred to individuals who maintain an attendance record of at least 75%

## COURSE INSTRUCTORS



**Dr Srimanta Mandal**  
PhD (ECE)  
IIT Mandi, India



**Dr Shruti Bhilare**  
PhD (CSE)  
IIT Indore, India



**Dr Rahul Mishra**  
PhD (CSE)  
IIT (BHU), India



**Dr Bakul Gohel**  
PhD (Bio & Brain Eng.)  
Daejeon, South Korea



**Ankush Chander**  
MTech (ICT)  
DA-IICT, India