

Joint Two Weeks Online Certificate Programme
organized by
IIT Guwahati, IIT Kanpur, IIT Roorkee, MNIT Jaipur, NIT Patna, NIT Warangal and
PDPM IITDM Jabalpur
Deep Learning and Applications
August 23rd to September 03rd, 2021

Date	Day	3:00-3:20 PM	3:30-5:30 PM	5:30-7:30 PM	9:00-10:00 PM
		Inaugural Session			
23-Aug-21	Monday	Inaugural Session	L1: Prof. Aparajita Ojha, IITDM Jabalpur Introduction to Artificial Intelligence, ML and ANN	P1: Introduction to Python Programming and a brief introduction to Keras, Google Colab (PTS)	
		3:00-5:00			
24-Aug-21	Tuesday		L2: Dr. Santosh Vipparthi, MNIT Jaipur Deep Neural Networks, Hyperparameters tuning, Regularization and Optimization	P2: Writing and running a code to build a Neural Network Classification model, hyper parameter tuning, Using different optimizers. (PTS)	
25-Aug-21	Wednesday		L3: Prof. Aparajita Ojha Convolutional Neural Networks, CNN Architectures	P3: Building a CNN Classification Model using Transfer learning (MV)	
26-Aug-21	Thursday		L4: Dr. Santosh Vipparthi Facial Expression Recognition using CNN	P4: Building a Deep Neural Network Model for facial expression recognition (MV)	
27-Aug-21	Friday		L5: Prof. Aparajita Ojha Autoencoders and their Applications, Image Segmentation using CNN	P5: Implementing an Encoder Decoder Model for image segmentation (SC)	
28-Aug-21	Saturday		L6: Prof. Aparajita Ojha Object Detection in Conventional Views	P6: Implementation of Object detection algorithm (PTS)	Quiz-1 (30 Minutes)
29-Aug-21	Sunday	Holiday			
		3:00-5:00			
30-Aug-21	Monday		L7: Dr. Santosh Vipparthi Object Detection/Moving Object in Aerial Views	P7: Implementation of Object detection in challenging scenarios (MV)	
31-Aug-21	Tuesday	Holiday (Janmashtami)			
01-Sep-21	Wednesday		L8: Dr Sriparna Saha, IIT Patna Recurrent Neural Networks Part 1: Basics of RNN, LSTM, GRU and Attention Models	P8: Implementation of an LSTM model for sequence data (PTS)	
02-Sep-21	Thursday		L10: Dr Sriparna Saha RNN Part 2: Applications of RNN, Image caption generation using RNN.	L11: MATLAB Team Deep Reinforcement Learning	Quiz 2 (30 minutes)
03-Sep-21	Friday		L12: MATLAB Team Wavelets with CNN	P8: MATLAB Team Generative Adversarial Networks 7:30-7:45 Valedictory	

PTS: Ms Poornima Singh Thakur ; MV: Ms Monu Verma; SC: Ms Shubhangi Chaturvedi