



Electronics & ICT Academy

(Under Ministry of Electronics and Information Technology (MeitY), Govt. of India)

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Online Faculty Development Programme on "Artificial Intelligence using Python Programming"

Date: 25 - 31 May, 2020

Venue: KITS Guntur

Date	Time	Topic
Day-1 (25-05-2020)	10:00 am - 12:00 noon	1. Introduction to Python and Python Programming <ul style="list-style-type: none"> ▪ Python Environment Setup ▪ Instructions for Installing Anaconda and Managing Environment ▪ Introduction to Python programming Platform 2. Data Analytics <ul style="list-style-type: none"> ▪ Introduction to python packages ▪ Working with Numpy, Pandas, Matplotlib, Seaborn ▪ Working with Data, Data Preprocessing and Visualization
	12:00 noon - 01:00 pm	Query Handling
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Hands-on Practice
Day-2 (26-05-2020)	10:00 am - 12:00 noon	<ul style="list-style-type: none"> ▪ Machine Learning <ul style="list-style-type: none"> • Introduction to Machine Learning • End to end cycle of Machine learning • Gradient descent algorithm ▪ Supervised learning methods <ul style="list-style-type: none"> ○ Regression - Linear regression and its types
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Working with Dataset – Application (Hands – on)
Day-3 (27-05-2020)	10:00 am - 12:00 noon	<ul style="list-style-type: none"> • Logistic regression • Time Series Analysis
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Hands-on Practice
Day-4 (28-05-2020)	10:00 am - 12:00 noon	<ul style="list-style-type: none"> ▪ Machine Learning <ul style="list-style-type: none"> • Unsupervised learning methods <ul style="list-style-type: none"> ○ Support vector machines ○ kNN ○ Clustering Concepts, k-Means Clustering
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Hands-on Practice
Day-5 (29-05-2020)	10:00 am - 12:00 noon	Deep Learning <ul style="list-style-type: none"> • Artificial Neural Networks <ul style="list-style-type: none"> ○ ML vs DL ○ Introduction to Neural Networks ○ Deep Neural Network – Classification ○ Applications
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Deep Neural Network Implementation (Hands- On)

Day-6 (30-05-2020)	10:00 am - 12:00 noon	<ul style="list-style-type: none"> • Conventional Neural Network <ul style="list-style-type: none"> ○ Solving computer vision problems using DCNN • Natural Language Processing <ul style="list-style-type: none"> ○ Using Neural Networks to solve NLP problems ○ Recommendation Systems ○ Classic application of NLP
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm - 03:00 pm	Break
	03:00 pm - 05:00 pm	Hands-on Practice
Day-7 (31-05-2020)	10:00 am - 12:00 noon	<ul style="list-style-type: none"> • Recurrent Neural Network using LSTM <ul style="list-style-type: none"> ○ Simple Recurrent Unit ○ Advanced Recurrent Unit <p>Working With GPU (Demo)</p> <ul style="list-style-type: none"> ▪ Introduction to NVIDIA GPUs for High Speed Computing ▪ Object Recognition Algorithms ▪ Live Object Detection using JETSON NANO <ul style="list-style-type: none"> • Project problem Statement discussion
	12:00 noon - 01:00 pm	Query Handling and Evaluation
	01:00 pm – 03:00 pm	Break
	03:00 pm – 05:00 pm	Hands-on Practice Valedictory

**** 5 Hrs of Project**
