



Contact us @

Highlights



venkat.kagita@nitw.ac.in



6281746931

- ✓ 15 days course
- ✓ Two hours per day.
- ✓ Flexible timings 6-8 PM
- ✓ Hands-on experience with Python.
- ✓ Real-world projects.
- ✓ Online course.

**Organized by Department of CSE
Coordinator and Instructor:**

Dr. Venkateswara Rao Kagita

**30 hours Course
on
Machine Learning for
Data Science
using Python
(August 16th – 30th, 2022)**

In association with Center for Continuing Education (CCE), NIT Warangal



Course Content

➤ Introduction

What is Data Science, Real-life examples and Applications, Data Scientist roles, Machine Learning vs. Data Science vs. AI, Machine Learning types, Generics of ML approaches.

➤ Python Essentials

Data manipulation tools, NumPy, Pandas, Visualization, Scikit-Learn.

➤ Probability and Statistics for Data Science

Basic probability theory, Random variables, Probability distributions, Markov models, Bayesian learning, Applications.

➤ Regression Analysis

Univariate linear regression, Multivariate linear regression, Polynomial Regression, Applications.

➤ Classification

Logistic regression, SVM, Multi-class SVM, Decision trees, Applications.

➤ Ensemble Approaches

Bagging, Random Forests, Boosting: Adaboost, Gradient boosting, Applications.

➤ Optimization

Gradient descent, Stochastic gradient descent, Batch gradient descent.

➤ Clustering

Different clustering approaches and applications.

➤ Feature Engineering

Feature Scaling, Feature Selection: Filter methods, Wrapper methods, Embedded methods.

➤ Dimensionality Reduction

Principal component analysis, Linear discriminative analysis, Multiple discriminant analysis.

➤ Neural Networks

Introduction to neural networks, Back propagation algorithm and theory behind, Introduction to deep learning.

➤ Reinforcement Learning

Markov Decision Process, Planning, Estimation, Control and Applications.

➤ Recommendation Systems

Introduction, Types of recommender systems, Content-based, Collaborative filtering: Matrix factorization based approaches, Knowledge-based, and Hybrid techniques, Times series forecasting, other real time examples.

➤ Hands-on to the majority of the topics using Python.

Projects

- ✓ House price prediction using regression techniques.
- ✓ Customer churn prediction using decision tree & ensemble approaches.
- ✓ Handwriting digit recognition using neural network.
- ✓ Diabetics prediction using logistic regression.
- ✓ Color compression using K-means clustering
- ✓ Self-Driving Cabs using Q-Learning

Where Technology Meets Innovation



Registration Fee

Category	Amount
Academic	Rs. 1000/-
Industry	Rs. 2000/-



Account Details

Account Number	62403680215 (Savings Account)
Account Name	Center for Continuing Education NITW
Bank Name:	State Bank of India
Branch:	NIT Warangal
IFSC Code	SBIN0020149

Registration link: <https://forms.gle/ZQCQujgnHmCNX62r7>

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