

Contact us @



venkat.kagita@nitw.ac.in



9966456713

Highlights

- √ 10-day workshop.
- √ 2 hours per day.
- ✓ Flexible timings 7:00- 9.00 PM
- ✓ Hands-on experience with Python.
- ✓ Real-world projects.
- ✓ Online mode.
- ✓ No class on special days.
- √ Video recordings will be available
- √ E-certificate of participation

K.V. Kadambari, Department of Coordinators: Warangal Program Sandhya,

Online short-term course on Machine Learning with Python

(24th November – 4th December, 2025)

Course Content

> Introduction

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

- Python Essentials
 - Data manipulation tools, NumPy, Pandas, Visualization, Scikit-Learn.
- Probability Concepts for Machine Learning

Basic probability theory, Random variables, Probability distributions, Bayesian theorem.

- > Regression Analysis
 - Univariate linear regression, Multivariate linear regression, Polynomial Regression, Applications.
- Classification
 - Logistic regression, SVM, Multi-class SVM, Decision trees, Naïve Bayes, 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

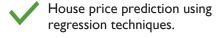
Feature Scaling, Feature Selection: Filter methods, Wrapper methods, Embedded methods.

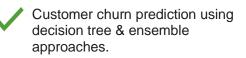
- Dimensionality Reduction
 - Principal component analysis, Linear discriminative analysis, Multiple discriminant analysis.
- Neural Networks

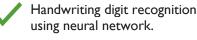
Introduction to neural networks, Back propagation algorithm and theory behind, Introduction to deep learning.

- > 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.

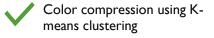
Projects

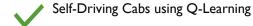






Diabetics prediction using logistic regression.







Registration Fee	Rs. 1000/-
Prerequisite	Machine Learning Course
Who can register?	UG, PG, PhD students, Faculty, and Industry experts.
Deadline	22 nd November. Note: We may close the form early if the allocated number of registrations is reached.

Account Number	62266262236
Account Name	Director Research Account
Bank Name:	State Bank of
	India
Branch:	NIT Warangal
IFSC Code	SBIN0020149

Registration link: https://forms.gle/jErQRrzPNBvoBw4x7