

## Python Master Class A-Z

Python is the most powerful programming language for data analytics, machine learning and artificial intelligence.

### Modules:

- Python for data analysis, analytics & visualization
- Python for machine learning

### Course Outline

#### Python Basics:

- Introduction to different data types
- Data sourcing/access/mapping
- Data manipulation/munging
- Data analytics
- Data visualization

#### Python Advance:

- Advanced data manipulation/munging
- Advanced data visualization
- Advanced data analytics

#### Machine Learning Basics:

- Supervised machine learning:
  - i- Regression
  - ii- Classification
- Unsupervised machine learning:
  - i- Clustering

#### Machine Learning Data Science Pipeline

- Data preprocessing
- Data splitting
- Feature engineering
- Data visualization

- Machine learning algorithm selection
- Metrics evaluation

### **Machine Learning Deep Dive**

- Real world use cases
- Regression
- Multiple regression
- classification
- Multiple classification
- Multi-label classification

### **Metrics Evaluation:**

- Accuracy
- F1-score
- Precision
- Sensitivity
- Confusion matrix

### **Real World Projects:**

- Default python dataset (titanic dataset, iris dataset, Indian diabetes dataset)
- Project from Kaggle dataset
- Project from UCI machine learning dataset
- Real world application

### **Artificial Intelligence:**

- Sneak peak into deep learning
- Use Case of any machine learning problem comparison to deep learning results