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#1 IT Training Institute

6 Weeks / Month Training

• PYTHON •

• ML •

• AI •

• DOT NET •

• WORDPRESS •

• PHP •

• DIGITAL MARKETING •

• WEB DESIGNING •

• SEO •



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Python Syllabus



Understanding Programming World

- 1) Understanding programming language
- 2) What is Python
- 3) How Python is different from C/C++ or Other languages
- 4) Under standing 3 Tier Architect

Understanding the Development Environment

- 1) What are different Architect
- 2) Understanding 3 tier Architect
- 3) Different options for UI and Backend

Python Lecture Zero

- 1) History of Python
- 2) Setting up python Machine in cloud
- 3) Introduction to Popular IDE
- 4) Online Python Programming Environment Jupyter

Python "Hello World!!"

- 1) Creating a Python "Hello World" program
- 2) Anatomy of Python Program

Starting with Python

1) Python Variables

- a. Numbers
- b. Strings
- c. Others

2) Python String Manipulation and in build Methods



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3) Python Operators

- a. Math Operators
- b. Assignment Operators
- c. Logical Operators

4) Python Collection

- a. List Data Type
- b. List constructor
- c. List methods
- d. Tuple data Type
- e. Tuple Methods
- f. Set data Type
- g. Set methods
- h. Dictionary Type

5) Understanding Python Modules

- a. Modules Introduction
- b. Importing Modules
- c. Modules Alias

6) Program Flow

- a. IF Block
- b. IF Else Block
- c. AND & OR Condition in IF
- d. While Loop
- e. Break & Continue
- f. For loop
- g. Range Function in For Loop



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7) Exception Handling

- a. Introduction to Error handling
- b. Try Statement
- c. Try Exception

Quick Python Project: Magic 8 Ball Game

8) Working with Files

- a. Opening & Closing file
- b. Reading File data
- c. Writing Data back to file
- d. Locks on Files for data integrity

9) Working with CSV files

- a. Understanding CSV files
- b. .CSV Modules
- c. Read CSV files
- d. Print CSV files
- e. Write to CSV files
- f. Filter CSV files

10) Working with Functions

- a. Python Function
- b. Calling a Function
- c. Passing arguments to function
- d. Variable Scope In function
- e. Return keyword



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Python Syllabus



11) Object Oriented programming

- a. Python Class
- b. Class Property
- c. _Init Function
- d. Class Function
- e. Create an object
- f. Delete an object

12) Inheritance & Polymorphism in Python

- a. Python Class Inheritance
- b. Polymorphism in Python
- c. Function Override in Inheritance

13) Decorators with Python

14) Generators with Python

Machine Learning

1) Introduction

- a. What is Machine Learning
 - i. Supervised Machine learning
 - ii. Unsupervised Machine Learning
- b. Why ML is the future
- c. Data + Algorithm = Machine Learning

2) Linear Regression with one Variable

- a. Model representation
- b. Cost Function
- c. Cost Function - Intuition-I
- d. Cost Function - Intuition-II



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Python Syllabus



3) Parameter Learning

- a. Gradient Descent
- b. Gradient Descent Intuition
- c. Gradient Descent for Linear Regression

4) Linear Algebra

- a. Matrices and vectors
- b. Addition and Scalar manipulation
- c. Matrices and Vector multiplication
- d. Matrices and Matrices multiplications
- e. Matrices multiplications properties
- f. Inverse
- g. Transpose

5) Multivariate Linear Regression

- a. Multiple Feature
- b. Gradient Descent for Multiple Feature
- c. Gradient Descent in Practice I - Feature Scaling
- d. Gradient Descent in Practice II - Learning Rate
- e. Features and Polynomial Regression

6) Computing Parameters Analytically

- a. Normal Equation
- b. Normal Equation Noninvertibility

7) Classification and Representation

- a. Classification
- b. Hypothesis Representation
- c. Decision Boundary



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8) Logistic regression Model

- a. Cost
- b. Simplified Cost function and Gradient Descent
- c. Advance Optimization

9) Multiclass Classification

- a. Multiclass Classification: One Vs All
- b. Use Case of Multiclass Classification

10) Solving the Problem of Overfitting

- a. The Problem of Overfitting
- b. Cost Function
- c. Regularized Linear Regression
- d. Regularized Logistic Regression



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