Python Certification Training

About Intellipaat

Intellipaat is a fast growing professional training provider that is offering training in over 150 most sought-after tools and technologies. We have a learner base of 700,000 in over 32 countries and growing. For job assistance and placement we have direct tie-ups with 80+ MNCs.

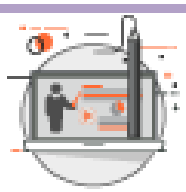
Key Features of IntellipaatTraining :

24X7 Life Time Support and Assistance	Real Time Projects	Life Time Access and Free Upgrade	Job Assistance	Industry Recognised Certification

About the Course

This Intellipaat Python training course is a complete course that will help you to clearly understand the programming language that is exclusively used for Data Science. In this Python programming training you will be exposed to both the basic and advanced concepts of Python like machine learning, Deep Learning, Hadoop streaming, MapReduce in Python, and work with packages like Scikit and Scipy.

Instructor Led
Duration – 39 Hrs
Weekend Batch – 3 Hrs/Session



Self Paced
Duration – 24Hrs

Why Take This Course ?

Python is a highly popular object-oriented language that is fast to learn and easy to deploy. It can run on various systems like Windows, Linux and Mac thus make it highly coveted for the data analytics domain. Upon completion of training you can work in the Big Data Hadoop environment for very high salaries.

- Python's design & libraries provide 10 times productivity compared to C, C++, or Java
- A Senior Python Developer in the United States can earn $102,000 – indeed.com

Course Contents

Introduction to Python ❖ What is Python Language and features ❖ Why Python and why it is different from other langauages. ❖ Installation of Python ❖ Anaconda Python distribution for Windows, Mac, Linux. ❖ Run a sample python script, working with Pyhton IDE's. ❖ Running basic python commands - Data types, Variables,Keywords,etc	**Hands on Exercises** ❖ Install Anaconda Python distribution for your OS (Windows/Linux/Mac)
Basic constructs of Python language ❖ Indentation(Tabs and Spaces) and Code Comments (Pound # character) ❖ Variables and Names ❖ Built-in Data Types in Python - Numeric: int, float, complex - Containers: list, tuple, set, dict - Text Sequence: Str (String) - Others: Modules, Classes, Instances, Exceptions, Null Object, Ellipsis Object - Constants: False, True, None, NotImplemented, Ellipsis, __debug__ ❖ Basic Operators: Arithmetic, Comparison, Assignment, Logical, Bitwise, Membership, Indentity ❖ Slicing and The Slice Operator [n:m] ❖ Control and Loop Statements: if, for, while, range(), break, continue, else	**Hands on Exercises** ❖ Write your first Python program ❖ Write a Python Function (with and without parameters) ❖ Use Lambda expression ❖ Write a class, create a member function and a variable, Create an object ❖ Write a for loop to print all odd numbers
Wrting Object Oriented Program in Python and connecting with Database ❖ Classes - classes and objects, access modifiers, instance and class members. ❖ OOPS paradigm - Inheritance, Polymorphism and Encapsulation in Python. Functions: Parameters and Return Types. ❖ Lambda Expressions, Making connection with Database for pulling data.	**Hands on Exercises** ❖ NA
File Handling, Exception Handling in Python ❖ Open a File, Read from a File, Write into a File ❖ Resetting the current position in a File ❖ The Pickle (Serialize and Deserialize Python Objects)	**Hands on Exercises** ❖ Open a text file and read the contents ❖ Write a new line in the opened file ❖ Use pickle to serialize a python object,

❖ The Shelve (Overcome the limitation of Pickle) ❖ What is an Exception ❖ Raising an Exception ❖ Catching an Exception	deserialize the object ❖ Raise an exception and catch it
Mathematical Computing with Python (NumPy) ❖ Arrays and Matrices, ND-array object ❖ Array indexing, Datatypes, Array math ❖ Broadcasting ❖ Std Deviation, Conditional Prob, Covariance and Correlation.	**Hands on Exercises** ❖ Import numpy module ❖ Create an array using ND-array ❖ Calculate std deviation on an array of numbers ❖ Calculate correlation between two variables
Scientific Computing with Python (SciPy) ❖ Builds on top of NumPy ❖ SciPy and its characteristics ❖ Subpackages: cluster, fftpack, linalg, signal, integrate, optimize, stats ❖ Bayes Theorem using SciPy	**Hands on Exercises** ❖ Import SciPy ❖ Apply Bayes theorem using SciPy on the given dataset
Data Visualization (Matplotlib) ❖ Plotting Grapsh and Charts (Line, Pie, Bar, Scatter, Histogram, 3-D). ❖ Subplots ❖ The Matplotlib API	**Hands on Exercises** ❖ Plot Line, Pie, Scatter, Histogram and other charts using Matplotlib
Data Analysis and Machine Learning (Pandas) OR Data Manipulation with Python ❖ Dataframes, NumPy array to a dataframe ❖ Import Data (csv, json, excel, sql database) ❖ Data operations: View, Select, Filter, Sort, Groupby, Cleaning, Join/Combine, Handling Missing Values ❖ Introduction to Machine Learning(ML) ❖ Linear Regression ❖ Time Series	**Hands on Exercises** ❖ Import Pandas ❖ Use it to import data from a json file ❖ Select records by a group and apply filter on top of that ❖ View the records ❖ Perform Linear Regression analysis ❖ Create a Time Series
Natural Language Processing, Machine Learning (Scikit-Learn) ❖ Introduction to Natural Language Processing (NLP) ❖ NLP approach for Text Data ❖ Environment Setup (Jupyter Notebook) ❖ Sentence Analysis ❖ ML Algorithms in Scikit-Learn ❖ What is Bag of Words Model ❖ Feature Extraction from Text ❖ Model Training ❖ Search Grid	**Hands on Exercises** ❖ Setup Jupyter Notebook environment ❖ Load a dataset in Jupyter ❖ Use algorithm in Scikit-Learn package to perform ML techniques ❖ Train a model ❖ Create a search grid

❖ Multiple Parameters ❖ Build a Pipeline	
Web Scraping for Data Science ❖ What is Web Scraping ❖ Web Scraping Libraries (Beautifulsoup, Scrapy) ❖ Installation of Beautifulsoup ❖ Install lxml Python Parser ❖ Making a Soup Object using an input html ❖ Navigating Py Objects in the Soup Tree ❖ Searching the Tree ❖ Output Print ❖ Parsing Full or Partial	**Hands on Exercises** ❖ Install Beautifulsoup and lxml Python parser ❖ Make a Soup object using an input html file ❖ Navigate Py objects in the soup tree ❖ Search tree ❖ Print output
Python on Hadoop ❖ Understanding Hadoop and its various components ❖ Hadoop ecosystem and Hadoop common ❖ HDFS and MapReduce Architecture ❖ Python scripting for MapReduce Jobs on Hadoop framework	**Hands on Exercises** ❖ Write a basic MapReduce Job in Python and connect with Hadoop Framework to perform the task
Writing Spark code using Python ❖ What is Spark,understanding RDDs, Spark Libs, ❖ Writing Spark code using python ❖ Spark Machine Libraries Mlib ❖ Regression, Classification and Clustering using Spark MLlib	**Hands on Exercises** ❖ Implement sandbox ❖ Run a python code in sandbox ❖ Work with HDFS file system from sandbox

Python Projects

Project 1

Python Web Scraping for Data Science

Objective - In this project you will be introduced to the process of web scraping using Python. It involves installation of Beautiful Soup, web scraping libraries, working on common data and page format on the web, learning the important kinds of objects, Navigable String, deploying the searching tree, navigation options, parser, search tree, searching by CSS class, list, function and keyword argument.

Project 2

Create a password generator

Objective – To generate a password using Python code which would be tough to guess

Requirements :–

- To generate a password that is 8-12 characters long
- Password contains at least two special characters
- Password doesn't start with a special character

Project 3

Impact of pre-paid plans on the preferences of investors

Domain – Finance

Objective – The project aims to find the most impacting factors in preferences of pre-paid model, also identifies which are all the variables highly correlated with impacting factors

Requirements

To identify the various reasons for Pre-paid model preference and non-preference among the investors. And also understand the penetration of the Pre-paid model in the brokerage firms

To identify the Pre-paid scheme advantages and disadvantages and also identify brand wise market shareIn addition to this, the project also looks to identify various insights that would help a newly established brand to foray deeper into the market on a large scale

Project 4

Machine Learning – Prediction of stock prices

Domain – Stock Market

Objective – This project focuses on Machine Learning by creating predictive data model to predict future stock prices

Requirements

Quatitative Value Investing: Predict 6-month price movements based fundamental indicators from companies' quarterly reports

Forecasting: Build time series models on the delta between implied and actual volatility

Predict 6-month price movements based fundamental indicators from companies' quarterly reports

Build time series models on the delta between implied and actual volatility?

Project 5

Server logs/Firewall logs

Objective – This includes the process of loading the server logs into the cluster using Flume. It can then be refined using Pig Script, Ambari and HCatlog. You can then visualize it using elastic search and excel.

This project task includes:

- Server logs
- Potential uses of server log data
- Pig script
- Firewall log
- Work flow editor

What makes us who we are

*"My motivation for doing the course was to make the best of the emerging market opportunities and upgrade my career. I feel my knowledge curve has grown tremendously""……**Read More!***

Dileep

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*"I thought of enrolling for a professional training in order to upgrade my skills in the most demanding technologies of the corporate world to further my career .It was a nicely conducted training program in order to help me to up my skills and get ahead in my career"….**Read More!***

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Subhroshmita