

## 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 600,000 in over 32 countries and growing. For job assistance and placement we have direct tie-ups with 80+ MNCs.

### Key Features of IntelliPaat Training:

 <b>Instructor Led Training</b> 39 Hrs of highly interactive instructor led training	 <b>Self-Paced Training</b> 24 Hrs of Self-Paced sessions with Lifetime access	 <b>Exercise and project work</b> 50 Hrs of real-time projects after every module	 <b>Lifetime Access</b> Lifetime access and free upgrade to latest version
 <b>Support</b> Lifetime 24*7 technical support and query resolution	 <b>Get Certified</b> Get global industry recognized certifications	 <b>Job Assistance</b> Job assistance through 80+ corporate tie-ups	 <b>Flexi Scheduling</b> Attend multiple batches for lifetime & stay updated.

## 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.

 <b>Instructor Led</b> <b>Duration – 39 Hrs</b> <b>Weekend Batch –3 Hrs/Session</b>	 <b>Self Paced</b> <b>Duration – 24 Hrs</b>
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## 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 Python certification 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 Content

Module /Topic	Hands on exercises
<p><b>Introduction to Python</b></p> <ul style="list-style-type: none"> <li>❖ What are Python Language and features?</li> <li>❖ Why Python and why it is different from other languages?</li> <li>❖ Installation of Python</li> <li>❖ Anaconda Python distribution for Windows, Mac, Linux</li> <li>❖ Run a sample python script, working with Python IDE's</li> <li>❖ Running basic python commands - Data types, Variables, Keywords, etc.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Install Anaconda Python distribution for your OS (Windows/Linux/Mac)</li> </ul>
<p><b>Basic constructs of Python language</b></p> <ul style="list-style-type: none"> <li>❖ Indentation(Tabs and Spaces) and Code Comments (Pound # character)</li> <li>❖ Variables and Names</li> <li>❖ Built-in Data Types in Python                             <ul style="list-style-type: none"> <li>○ Numeric: int, float, complex</li> <li>○ Containers: list, tuple, set, dict</li> <li>○ Text Sequence: Str (String)</li> <li>○ Others: Modules, Classes, Instances, Exceptions, Null Object, Ellipsis Object</li> <li>○ Constants: False, True, None, Not Implemented, Ellipsis, debug</li> </ul> </li> <li>❖ Basic Operators: Arithmetic, Comparison, Assignment, Logical, Bitwise, Membership, Identity</li> </ul>	<ul style="list-style-type: none"> <li>❖ Write your first Python program</li> <li>❖ Write a Python Function (with and without parameters)</li> <li>❖ Use Lambda expression</li> <li>❖ Write a class, create a member function and a variable, Create an object</li> <li>❖ Write a for loop to print all odd numbers</li> </ul>

<ul style="list-style-type: none"> <li>❖ Slicing and The Slice Operator [n:m]</li> <li>❖ Control and Loop Statements: if, for, while, range(), break, continue, else</li> </ul>	
<p><b>Writing Object-Oriented Program in Python and connecting with Database</b></p> <ul style="list-style-type: none"> <li>❖ Classes - classes and objects, access modifiers, instance and class members</li> <li>❖ OOPS paradigm - Inheritance, Polymorphism, and Encapsulation in Python</li> <li>❖ Functions: Parameters and Return Types</li> <li>❖ Lambda Expressions, Making a connection with Database for pulling data</li> </ul>	
<p><b>File Handling, Exception Handling in Python</b></p> <ul style="list-style-type: none"> <li>❖ Open a File, Read from a File, Write into a File</li> <li>❖ Resetting the current position in a File</li> <li>❖ The Pickle (Serialize and Deserialize Python Objects)</li> <li>❖ The Shelve (Overcome the limitation of Pickle)</li> <li>❖ What is an Exception</li> <li>❖ Raising an Exception</li> <li>❖ Catching an Exception</li> </ul>	<ul style="list-style-type: none"> <li>❖ Open a text file and read the contents</li> <li>❖ Write a new line in the opened file</li> <li>❖ Use pickle to serialize a python object, deserialize the object</li> <li>❖ Raise an exception and catch it</li> </ul>
<p><b>Mathematical Computing with Python (NumPy)</b></p> <ul style="list-style-type: none"> <li>❖ Arrays and Matrices, ND-array object</li> <li>❖ Array indexing, Datatypes, Array math</li> <li>❖ Broadcasting</li> <li>❖ Std Deviation, Conditional Prob, Covariance, and Correlation</li> </ul>	<ul style="list-style-type: none"> <li>❖ Import Numpy module</li> <li>❖ Create an array using ND-array</li> <li>❖ Calculate std deviation on an array of numbers</li> <li>❖ Calculate correlation between two variables</li> </ul>
<p><b>Scientific Computing with Python (SciPy)</b></p> <ul style="list-style-type: none"> <li>❖ Builds on top of NumPy</li> <li>❖ SciPy and its characteristics</li> <li>❖ Sub-packages: cluster, fftpack, linalg, signal, integrate, optimize, stats</li> <li>❖ Bayes Theorem using SciPy</li> </ul>	<ul style="list-style-type: none"> <li>❖ Import SciPy</li> <li>❖ Apply Bayes theorem using SciPy on the given dataset</li> </ul>

<p><b>Data Visualization (Matplotlib)</b></p> <ul style="list-style-type: none"> <li>❖ Plotting Graphs and Charts (Line, Pie, Bar, Scatter, Histogram, 3-D).</li> <li>❖ Subplots</li> <li>❖ The Matplotlib API</li> </ul>	<ul style="list-style-type: none"> <li>❖ Plot Line, Pie, Scatter, Histogram and other charts using Matplotlib</li> </ul>
<p><b>Data Analysis and Machine Learning (Pandas) OR Data Manipulation with Python</b></p> <ul style="list-style-type: none"> <li>❖ Dataframes, NumPy array to a dataframe</li> <li>❖ Import Data (CSV, JSON, Excel, SQL database)</li> <li>❖ Data operations: View, Select, Filter, Sort, Group by, Cleaning, Join/Combine, Handling Missing Values</li> <li>❖ Introduction to Machine Learning(ML)</li> <li>❖ Linear Regression</li> <li>❖ Time Series</li> </ul>	<ul style="list-style-type: none"> <li>❖ Import Pandas</li> <li>❖ Use it to import data from a JSON file</li> <li>❖ Select records by a group and apply a filter on top of that</li> <li>❖ View the records</li> <li>❖ Perform Linear Regression analysis</li> <li>❖ Create a Time Series</li> </ul>
<p><b>Natural Language Processing, Machine Learning (Scikit-Learn)</b></p> <ul style="list-style-type: none"> <li>❖ Introduction to Natural Language Processing (NLP)</li> <li>❖ NLP approach for Text Data</li> <li>❖ Environment Setup (Jupyter Notebook)</li> <li>❖ Sentence Analysis</li> <li>❖ ML Algorithms in Scikit-Learn</li> <li>❖ What is Bag of Words Model</li> <li>❖ Feature Extraction from Text</li> <li>❖ Model Training</li> <li>❖ Search Grid</li> <li>❖ Multiple Parameters</li> <li>❖ Build a Pipeline</li> </ul>	<ul style="list-style-type: none"> <li>❖ Setup Jupyter Notebook environment</li> <li>❖ Load a dataset in Jupyter</li> <li>❖ Use algorithm in Scikit-Learn package to perform ML techniques</li> <li>❖ Train a model</li> <li>❖ Create a search grid</li> </ul>
<p><b>Web Scraping for Data Science</b></p> <ul style="list-style-type: none"> <li>❖ What is Web Scraping</li> <li>❖ Web Scraping Libraries (Beautifulsoup, Scrapy)</li> <li>❖ Installation of BeautifulSoup</li> <li>❖ Install lxml Python Parser</li> <li>❖ Making a Soup Object using an input HTML</li> <li>❖ Navigating Py Objects in the Soup Tree</li> </ul>	<ul style="list-style-type: none"> <li>❖ Install BeautifulSoup and lxml Python parser</li> <li>❖ Make a Soup object using an input HTML file</li> <li>❖ Navigate Py objects in the soup tree</li> <li>❖ Search tree</li> </ul>

<ul style="list-style-type: none"><li>❖ Searching the Tree</li><li>❖ Output Print</li><li>❖ Parsing Full or Partial</li></ul>	<ul style="list-style-type: none"><li>❖ Print output</li></ul>
<p><b>Python on Hadoop</b></p> <ul style="list-style-type: none"><li>❖ Understanding Hadoop and its various components</li><li>❖ Hadoop ecosystem and Hadoop common</li><li>❖ HDFS and MapReduce Architecture</li><li>❖ Python scripting for MapReduce Jobs on Hadoop framework</li></ul>	<ul style="list-style-type: none"><li>❖ Write a basic MapReduce Job in Python and connect with Hadoop Framework to perform the task</li></ul>
<p><b>Writing Spark code using Python</b></p> <ul style="list-style-type: none"><li>❖ What is Spark, understanding RDDs, Spark Libs,</li><li>❖ Writing Spark code using python</li><li>❖ Spark Machine Libraries Mlib</li><li>❖ Regression, Classification, and Clustering using Spark MLlib</li></ul>	<ul style="list-style-type: none"><li>❖ Implement sandbox</li><li>❖ Run a python code in a sandbox</li><li>❖ Work with HDFS file system from the sandbox</li></ul>

## Project Work

### 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 BeautifulSoup, 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
- ❖ The 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 the 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 share. In 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 a predictive data model to predict future stock prices

### Requirements:

Quantitative 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
- ❖ Workflow editor

## Intellipaat Job Assistance Program

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Intellipaat is offering comprehensive job assistance to all the learners who have successfully completed the training. A learner will be considered to have successfully completed the training if he/she finishes all the exercises, case studies, projects and gets a minimum of 60% marks in the Intellipaat qualifying exam.

Intellipaat has exclusive tie-ups with over 80 MNCs for placement. All the resumes of eligible candidates will be forwarded to the Intellipaat job assistance partners. Once there is a relevant opening in any of the companies, you will get a call directly for the job interview from that particular company.

### Frequently Asked Questions:

#### **Q 1. What is the criterion for availing the Intellipaat job assistance program?**

Ans. All Intellipaat learners who have successfully completed the training post April 2017 are directly eligible for the Intellipaat job assistance program.

#### **Q 2. Which are the companies that I can get placed in?**

Ans. We have exclusive tie-ups with MNCs like **Ericsson, Cisco, Cognizant, Sony, Mu Sigma, Saint-Gobain, Standard Chartered, TCS, Genpact, Hexaware**, and more. So you have the opportunity to get placed in these top global companies.

#### **Q 3. Does Intellipaat help learners to crack the job interviews?**

Ans. Intellipaat has an exclusive section which includes the top interview questions asked in top MNCs for most of the technologies and tools for which we provide training. Other than that our support and technical team can also help you in this regard.

#### **Q 4. Do I need to have prior industry experience for getting an interview call?**

# Python Certification Training



Ans. There is no need to have any prior industry experience for getting an interview call. In fact, the successful completion of the IntelliPaat certification training is equivalent to six months of industry experience. This is definitely an added advantage when you are attending an interview.

## **Q 5. What is the job location that I will get?**

Ans. IntelliPaat will try to get you a job in your same location provided such a vacancy exists in that location.

## **Q 6. Which is the domain that I will get placed in?**

Ans. Depending on the IntelliPaat certification training you have successfully completed, you will be placed in the same domain.

## **Q 7. Is there any fee for the IntelliPaat placement assistance?**

Ans. IntelliPaat does not charge any fees as part of the placement assistance program.

## **Q 8. If I don't get a job in the first attempt, can I get another chance?**

Ans. Definitely, yes. Your resume will be in our database and we will circulate it to our MNC partners until you get a job. So there is no upper limit to the number of job interviews you can attend.

## **Q 9. Does IntelliPaat guarantee a job through its job assistance program?**

Ans. IntelliPaat does not guarantee any job through the job assistance program. However, we will definitely offer you full assistance by circulating your resume among our affiliate partners.

## **Q 10. What is the salary that I will be getting once I get the job?**

Ans. Your salary will be directly commensurate with your abilities and the prevailing industry standards.

## What makes us who we are?

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*"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"*

*-Dileep*



*"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"*

*- Subhroshmita*