

# PYTHON CERTIFICATION TRAINING

## About Intellipaat

Intellipaat is a global online professional training provider. We are offering some of the most updated, industry-designed certification training programs in the domains of Big Data, Data Science & AI, Business Intelligence, Cloud, Blockchain, Database, Programming, Testing, SAP and 150 more technologies.

We help professionals make the right career decisions, choose the trainers with over a decade of industry experience, provide extensive hands-on projects, rigorously evaluate learner progress and offer industry-recognized certifications. We also assist corporate clients to upskill their workforce and keep them in sync with the changing technology and digital landscape.

## About The Course

This IntelliPaat Python for Data Science training helps you learn the top programming language for the domain of Data Science. You will master the technique of how Python is deployed for Data Science, work with Pandas library for Data Science, do data munging, data cleaning, advanced numeric analysis and more through real world hands-on projects and case studies.

 <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>24x7 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.

## Why take this Course?

- Python's design and 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

	C++	Java	Python
Ease of Use	Verbose	Verbose	Simpler and dynamically typed
Scalability	Platform depended	Cross platform	Cross platform
Deployment	Android and web application	Big Data	Data Science and Machine learning
Average Salaries	\$78,368	\$87,424	\$103,492

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; this makes it highly coveted for the Data Analytics domain. Upon the completion of Python certification training, you can work in the Big Data Hadoop environment for very high salaries.

## Course Content

1. Python Environment Setup and Essentials
2. Python language Basic Constructs
3. OOP concepts in Python and database connection
4. NumPy for mathematical computing
5. SciPy for scientific computing
6. Matplotlib for data visualization
7. Pandas for data analysis and machine learning
8. Scikit-Learn for Natural Language Processing
9. Web scraping with Python
10. Python deployed for Hadoop
11. Python for Apache Spark coding

# Python Environment Setup and Essentials

- ❖ Introduction to Python Language, features
- ❖ The advantages of Python over other programming languages
- ❖ Python installation
- ❖ Windows, Mac & Linux distribution for Anaconda Python
- ❖ Deploying Python IDE
- ❖ Basic Python commands, data types, variables, keywords and more.

## Python language basic constructs

- ❖ Built-in data types in Python, tabs and spaces indentation
- ❖ Code comment Pound # character, variables and names
- ❖ Python built-in data types, Numeric, int, float, complex, list tuple, set dict, containers, text sequence, exceptions, instances, classes, modules, Str(String), Ellipsis Object, Null Object, Ellipsis, Debug, basic operators, comparison, arithmetic, slicing and slice operator, logical, bitwise, loop and control statements, while, for, if, break, else, continue.

## OOP concepts in Python and database connection

- ❖ How to write OOP concepts program in Python
- ❖ Connecting to a database
- ❖ Classes and objects in Python
- ❖ OOPs paradigm, important concepts in OOP like polymorphism, inheritance, encapsulation, Python functions, return types, and parameters, Lambda expressions
- ❖ Connecting to database and pulling the data.

## NumPy for Mathematical Computing

- ❖ Introduction to arrays and matrices
- ❖ Indexing of array, datatypes, broadcasting of array math
- ❖ Standard deviation, conditional probability
- ❖ Coorelation and covariance

## SciPy for Scientific Computing

- ❖ Introduction to SciPy and its functions
- ❖ Building on top of NumPy, cluster, linalg, signal, optimize, integrate, subpackages
- ❖ SciPy with Bayes Theorem.

## Matplotlib for Data Visualization

- ❖ How to plot graph and chart with Python
- ❖ Various aspects of line, scatter, bar, histogram, 3D
- ❖ The API of MatPlotLib, subplots.

## Pandas for Data Analysis and Machine Learning

- ❖ Introduction to Python dataframes, importing data from JSON, CSV, Excel, SQL database
- ❖ NumPy array to dataframe, various data operations like selecting, filtering, sorting, viewing, joining, combining
- ❖ How to handle missing values, time series analysis, linear regression.

## Scikit-Learn for Natural Language Processing

- ❖ What is natural language processing, working with NLP on text data, setting up the environment using Jupyter Notebook, analyzing sentence

- ❖ The Scikit-Learn machine learning algorithms
- ❖ Bags of words model
- ❖ Extracting feature from text
- ❖ Searching a grid,
- ❖ Model training, multiple parameters, building of a pipeline.

## Web scraping with Python

- ❖ Introduction to web scraping in Python, the various web scraping libraries, beautifulsoup, Scrapy Python packages
- ❖ Installing of beautifulsoup, installing Python parser lxml
- ❖ Creating soup object with input HTML, searching of tree
- ❖ Full or partial parsing, output print, searching the tree.

## Python deployed for Hadoop

- ❖ Introduction to Python for Hadoop
- ❖ The basics of the Hadoop ecosystem
- ❖ Hadoop common
- ❖ The architecture of MapReduce and HDFS
- ❖ Deploying Python coding for MapReduce jobs on Hadoop framework.

## Python for Apache Spark coding

- ❖ Introduction to Apache Spark
- ❖ Importance of RDD, the Spark libraries
- ❖ Deploying Spark code with Python
- ❖ The machine learning library of Spark MLlib
- ❖ Deploying Spark MLlib for classification
- ❖ Clustering and regression.

## Project Works

**Project 1 :** Analyzing the naming pattern using Python

**Industry :** General

**Problem Statement :** How to analyze the trends and most popular baby names

**Topics :** In this Python project you will work with the United States Social Security Administration (SSA) has made available data on the frequency of baby names from 1880 through 2016. The project requires analyzing the data considering different methods. You will visualize the most frequent names, determine the naming trends, and come up with the most popular names for a certain year.

**Highlights :**

- ✓ Analyzing data using Pandas Library
- ✓ Deploying Data Frame Manipulation
- ✓ Bar & box plots with Matplotlib.

**Project 2 : – Python Web Scraping for Data Science**

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 3 :-** Predicting Customer Churn in Telecom Company**Domain –** Telecommunications**Objective –** How to increase the profitability of a telecom major by reducing the churn rate

**Topics:** In this project, you will work with the telecom company's customer dataset. This dataset includes subscribing telephone customer's details. Each of the column has data on phone number, call minutes during various times of the day, the charges incurred, lifetime account duration and whether the customer has churned some services by unsubscribing it. The goal is to predict whether a customer will eventually churn or not.

**Highlights:-**

- ✓ Deploy Scikit-Learn ML library
- ✓ Develop code with Jupyter Notebook
- ✓ Build a model using performance matrix

**Project 4 :** 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 HCatalog. You can then visualize it using elastic search and excel.

This project includes:

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

## Job Assistance Program

Intellipaat is offering job assistance to all the learners who have completed the training. You should get a minimum of 60% marks in the qualifying exam to avail job assistance. Intellipaat has exclusive tie-ups with over 80 MNCs for placements.



Successfully finish the training

Get your resume updated

Start receiving interview calls

## Intellipaat Alumni Working in Top Companies



**Jayesh Modi** 

**Sr. Python Programmer at Marlabs Inc.**

This Python online training course is awesome. Clear explanations and good examples. Good piece of work, it helps to get deep dive into this subject in just a few days! Python certification course is great!



**Vikrant Singh** 

**Senior Associate at JPMorgan Chase & Co.**

It was a wonderful experience and learning from Intellipaat trainers. The trainers were hands on and provided real time scenario's. For me learning cutting edge and latest technologies intellipaat is the right place



**Aalap Raj** 

**Hadoop Developer at Cognizant**

Excellent videos and interactive mode of Python online teaching. Instructors are well informed and clear while communicating.

[More Customer Reviews](#)

## Our Clients

ERICSSON



SONY



**+80 Corporates**

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

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 4. 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 5. 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.