



CERTIFIED GCP

PROGRAM BROCHURE

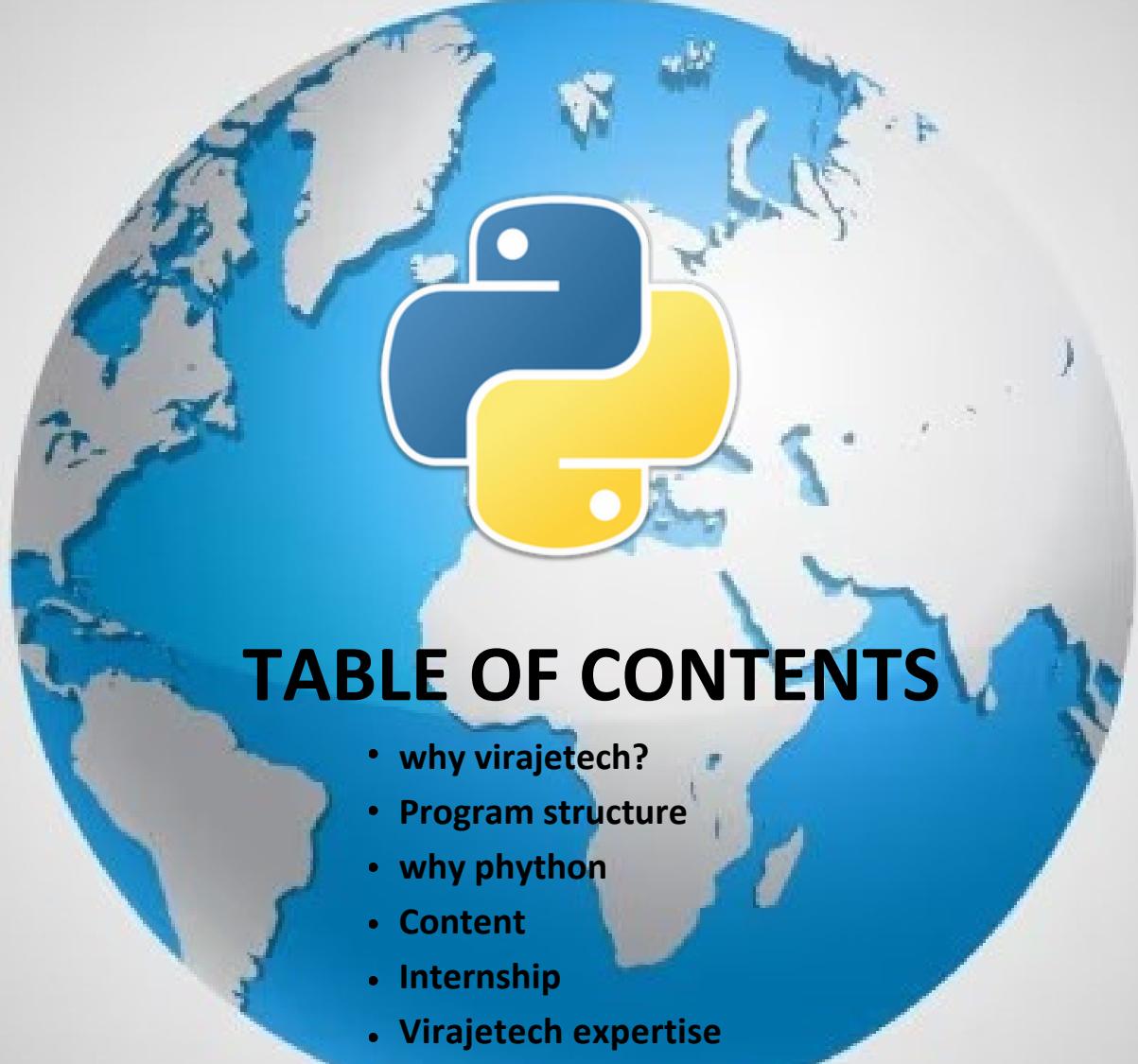


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WHY VIRAJETECH?

“OUR VISION”

To be the safest, most progressive Technology Provider, relentless in the pursuit of Client and employee excellence

Virajetech's Placement Team has garnered a reputation for the industry's most exceptional placement records. Their dedicated efforts have facilitated the successful transition of thousands of aspirants into flourishing careers .



EXPERT TRAINERS

10+year experienced and Industry Experts
Elite Faculty from Prestigious universities with deep research and coaching expertise



COMPREHENSIVE

30 hours & 700+ Learning Hrs.
Syllabus aligned with virajetech standards and rigorously updated to match with latest industry requirements

JOB ASSISTANCE

End to End job Support
Personalized resume and interview preparation support Job updates and connects

REALTIME EXPERIENCE

Projects and Internships
20 capstone projects and 1 client projects with active interaction
Internship -developing POCs

PROGRAM STRUCTURE

- THE COURSE FOR BEGINNER's PROFESSIONALS AND INTERMEDIATE LEARNERS IN THE FIELD OF
- AWS THIS IS A CAREER- ORIENTED PROGRAM, DESIGNED TO IMPART A STRONG FOUNDATION



- PRE COURSE SELF-STUDY
- HIGH QUALITY VIDEOS
- EASY LEARNING APPROACH.
- CERTIFICATIONS
- JOB READY PROGRAM

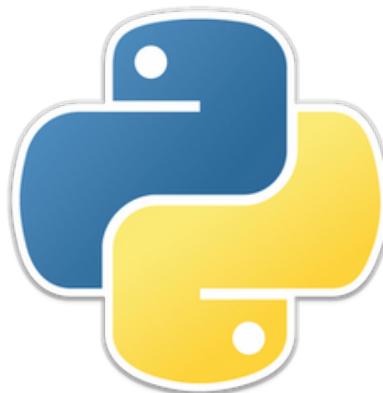


- LIVE TRAINING
- 30 HOUR A WEEK
- COMPREHENSIVE SYLLABUS
- HANDS-ON PROJECTS
- EXPERT TRAINERS AND MENTORS



Python

Programming in Big Data-Apache Spark



WHY PYTHON?

In the IT industry, a Python course is essential for professionals as Python's simplicity and versatility make it a go-to language for web development, data science, and AI. Mastering Python accelerates project timelines, enhances productivity, and opens doors to diverse career opportunities in the rapidly evolving tech landscape. Employers highly value Python proficiency, recognizing its pivotal role in driving innovation and efficiency. Python's extensive community support ensures access to a wealth of resources and collaborative problem-solving. The language's popularity is evident in its use across various domains, making it a valuable skill for staying competitive in the ever-changing IT industry.



1 Introduction to Big Data and Apache Spark

- ***Definition and Characteristics of Big Data***
- ***Challenges and Opportunities in Big Data***
- ***Introduction to Apache Spark***
- ***Spark's Role in Big Data Processing***
- ***Overview of the Apache Spark Ecosystem***
- ***Big Data Use Cases***
- ***Spark vs. Traditional Data Processing Systems***
- ***Key Features of Apache Spark***
- ***Spark's In-Memory Processing Capability***
- ***Spark's Fault Tolerance Mechanisms***

2 Getting Started with Apache Spark using Python

- ***Introduction to PySpark (Spark with Python)***
- ***Basics of Spark DataFrames and RDDs***
- ***Working with Spark Shell for Interactive Programming***
- ***Basic Spark Operations and Transformations***
- ***Using PySpark in Jupyter Notebooks***
- ***Spark Application Development Life Cycle***
- ***Data Exploration with PySpark***
- ***PySpark DataFrame Operations***
- ***Hands-On Exercises with PySpark***

3 Data Processing with Spark

- *Understanding DataFrames and RDDs in Spark*
- *Introduction to Spark SQL for Structured Data Processing*
- *Real-time Data Processing with Spark Streaming*
- *Window Operations in Spark Streaming*
- *Batch Processing vs. Stream Processing in Spark*
- *Building End-to-End Data Processing Pipelines*
- *Handling Data Skewness in Spark*
- *Performing ETL Operations with Spark*
- *Case Studies of Spark Data Processing*

4 Spark Machine Learning (MLlib) with Python

- *Building Machine Learning Pipelines*
- *Feature Extraction and Transformation in Spark MLlib*
- *Implementing Clustering Algorithms in Spark*
- *Classification Models with Spark MLlib*
- *Model Evaluation and Hyperparameter Tuning*
- *Integrating Spark MLlib with DataFrames*
- *Advanced Machine Learning Use Cases*
- *Real-world Applications of MLlib*
- *Hands-On Exercises with Spark MLlib*

5 Spark Graph Processing (GraphX) with Python

- *Working with Property Graphs and GraphFrames*
- *Graph Algorithms and Analysis in Spark*
- *Overview of GraphX API in PySpark*
- *Implementing Graph Processing Use Cases*
- *Social Network Analysis with Spark GraphX*
- *Fraud Detection Using Graph Algorithms Real-world Applications of Graph Processing*

- ***Challenges and Best Practices in GraphX***
- ***Hands-On Graph Processing with PySpark***

6 Spark SQL and DataFrames in Depth

- ***Advanced DataFrames Operations in PySpark***
- ***Implementing User-Defined Functions (UDFs)***
- ***Handling Missing Data in PySpark***
- ***Caching and Persistence Strategies in Spark***
- ***Optimizing Query Performance in Spark SQL***
- ***Schema Evolution in Spark DataFrames***
- ***Advanced Spark SQL Features***
- ***Real-world Use Cases of Spark SQL***
- ***Best Practices for Working with DataFrames***

7 Spark Performance Tuning

- ***Configuring and Tuning Spark Parameters***
- ***Memory Management Strategies in Spark***
- ***Optimizing Shuffle Operations in Spark***
- ***Benchmarking and Profiling Spark Applications***
- ***Identifying Bottlenecks in Spark Performance***
- ***Monitoring Spark Applications***
- ***Spark Cluster Sizing and Resource Allocation***
- ***Strategies for Troubleshooting Spark Performance Issues***
- ***Best Practices for Spark Performance Tuning***

8 Spark Streaming and Structured Streaming

- ***Windowed Operations and Stateful Processing***
- ***Integrating Spark Streaming with External Systems***
- ***Overview of Structured Streaming in Spark***
- ***End-to-End Event Processing with Structured Streaming***
- ***Handling Fault Tolerance in Spark Streaming***
- ***Real-time Analytics with Structured Streaming***
- ***Spark Streaming Applications in Industry***
- ***Challenges and Limitations of Spark Streaming Hands-***
- ***On Exercises with Spark Streaming***

9 Spark and Big Data Storage Systems

- ***Spark and Apache Hive Integration***
- ***Connecting Spark with NoSQL Databases (Cassandra, HBase)***
- ***Interaction with Cloud Storage (Amazon S3, Azure Data Lake)***
- ***Optimizing File Formats for Spark (Parquet, Avro)***
- ***Real-world Use Cases of Spark with Storage Systems***
- ***Strategies for Efficient Data Loading in Spark***
- ***Challenges in Working with Various Storage Systems***
- ***Data Lake Architecture with Spark***
- ***Hands-On Data Storage Integration with PySpark***

10 Spark and Big Data Processing Platforms

- ***Real-time Data Processing with Spark and Kafka***
- ***Spark on Kubernetes and Docker Containers***
- ***Apache Flink and Spark for Stream Processing***
- ***Spark and Hadoop Integration***
- ***Spark on Cloud Platforms (AWS, Azure, Google Cloud)***
- ***Managing Spark Resources in a Containerized Environment***
- ***Hybrid Deployments with Spark and On-Premises Infrastructure***
- ***Best Practices for Deploying Spark on Different Platforms***
- ***Hands-On Integration with Various Processing Platforms***

11 Spark Security and Authentication

- ***Configuring Spark Authentication Mechanisms***
- ***Authorization in Spark Applications***
- ***Implementing SSL/TLS Encryption in Spark***
- ***Role-Based Access Control (RBAC) in Spark***
- ***Security Best Practices for Spark***
- ***Auditing and Monitoring Security Events in Spark***
- ***Key Management in Spark Applications***
- ***Challenges in Securing Distributed Spark Environments***
- ***Hands-On Security Implementation in Spark***

INTERNSHIP

Explore valuable internship opportunities with us! Join a dynamic and innovative environment, collaborate on real-world projects, and enhance your skills. We're seeking motivated individuals with a passion for learning and strong communication skills. This internship offers hands-on experience, exposure to industry best practices, and potential career pathways.



VIRAJETECH EXPERTISE CLASS



VIRAJETECH EXPERTISE CLASS

PLACEMENT ASSISTANCE TEAM



PROJECT MENTORING

35 hours Live
Mentoring in industry
projects

DOUBTS SESSIONS

Twice a week, Live
doubts session from
mentors and
experts

JOB COUNSELLING

Mapping your
profile to suitable
job role

INTERVIEW QUESTIONS

Frequently asked
interview questions
course included

ALUMNI CONNECT

Connect with
successful Alumni to
learn from experience

RESUME SUPPORT

Personalized resume
creation support from
professionals

PLACEMENT ASSISTANCE



Mercedes-Benz

HCL

OUR LEARNERS' FEED BACK

HIGHEST LEVEL OF CUSTOMER DELIGHT

 **ruchi s**
1 review · 3 photos
 3 months ago

VirajeTech has been a game-changer for me. Their training courses have provided me with the skills I needed to excel in my career 4X. The instructors and Arjun sir are passionate about what they do, and it shows in their teaching. Hands on and practical way of teaching, I highly recommend VirajeTech to anyone looking to further their knowledge and skills

 **Anoop G**
6 reviews
 3 months ago

Getting placed at Amency was a dream come true, and I owe a big thank you to VirajeTech for making it possible. The instructors were experts in their field, and they created a supportive learning environment. The hands-on approach and practical exercises made all the difference.

 **Sachidanand Shahane**
3 reviews
 7 months ago

I am part of the AWS Associate master Class. The course was designed in a fashion that we are able to cover most of the content in a very short time. our trainer Kumar sir clarified any doubt we had and also pushed us to do the practicals which is really helpful in the learning process. He having vast knowledge and experience in Devops and Multi cloud platform(AWS,Azure,GCP),he provide the opportunity to get as much knowledge and guidance as possible. each session are interactive has real time use cases.

 **Sayali Gawde**
2 reviews
 a year ago

Thanks for the AWS tutoring by Virajtech. The best decision I have taken in my career so far. Instructor was very helpful and gave all possible solutions related to the problem which we faced in real time scenarios. This is what I have experienced in this course, a very practical and beneficial one.

 **Piyush Poply**
2 reviews
 3 years ago

I am connected with this organization since its inception. This is one of the best places to learn, practice and grow your skills up to the standards of the industry. As in IT industry, maintaining your skills and updating yourself is the most important thing, we should never stop learning and this is exactly what this institute provides. The online classes are really great as well as the trainers.

 **Harpreet Singh**
12 reviews
 7 months ago

Give very detailed explanation and also live teaching classes. Covering all latest topics which for sure help in getting jobs in today's market

ADMISSIONS AND CONTACTS

ENQUIRE FOR DETAILED INFORMATION FOR ENROLLMENT

DURATION:35 HOURS

LEARNING : ONLINE MODE

b 1st floor, 64, 3rd Cross Rd, Electronics City
Phase 1, Electronic City, Bengaluru, Karnataka
560100

PHN NO:8618501719



8 HRS/WEEK



8 HRS/WEEK



4 HRS/WEEK

SELF STUDY

INSTRUCTOR LED LIVE ONLINE LEARNING

PROJECTS & ASSESSMENTS

20 HOURS A WEEK COMMITMENT



python IS RATED AS THE TOP CAREER
HIGHEST PAID – RECESSION PROOF – MILLIONS OF JOBS



TAKE YOUR FIRST STEP TOWARDS python
CAREER

ENQUIRE NOW

THANK you



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