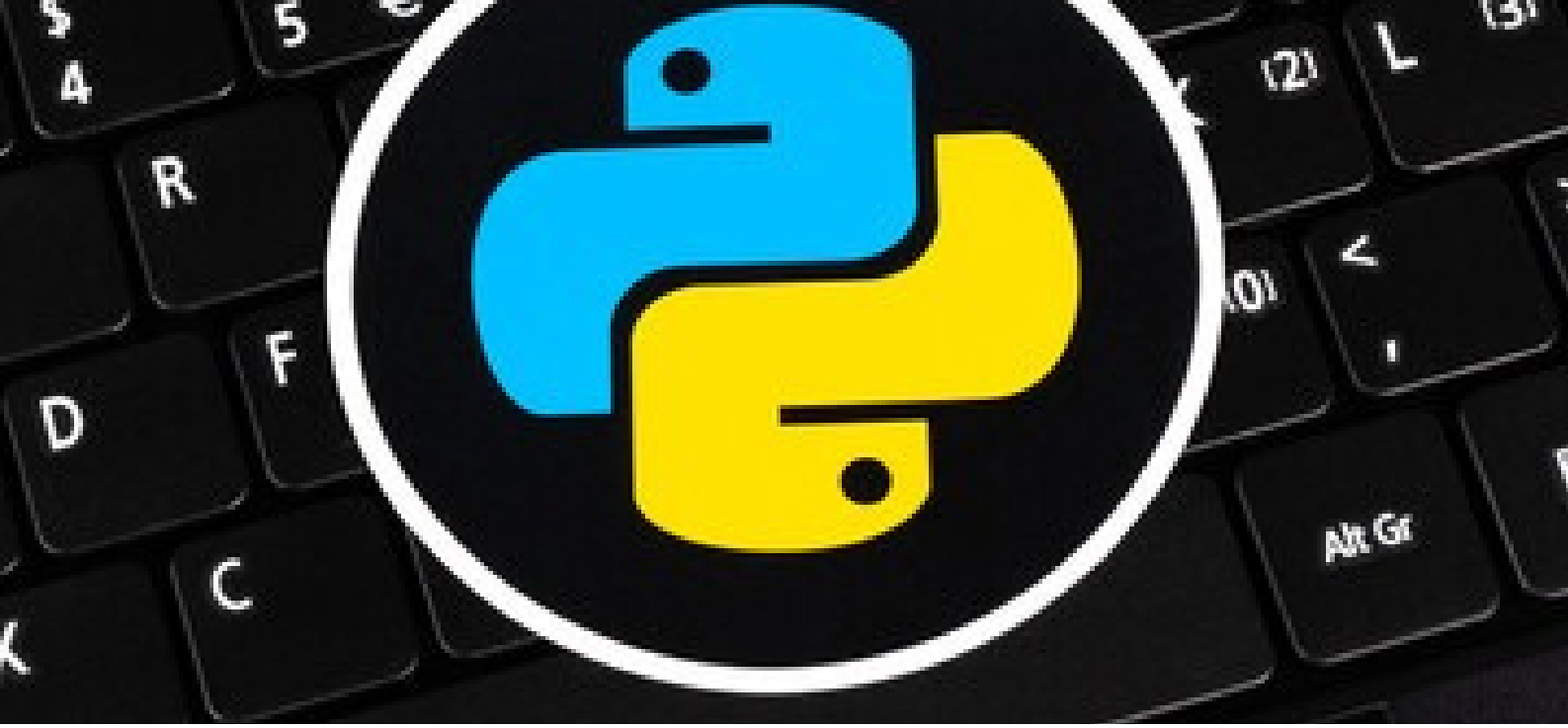
VIRAJE TECH

SCALA

- Access to Interview Opportunities with Top Companies
- Industry-Relevant Curriculum Designed and Taught by Industry Experts
- Hands on Project and Industry Specific Tools
- Dedicated CareerSupport and Interview Preparation
- Post Graduate Certificatefrom Great Lakes Executive Learning



Python has become a cornerstone in the IT industry due to its versatility, readability, and extensive ecosystem of libraries and frameworks. Widely adopted for web development, data science, machine learning, and automation, Python offers a simple syntax that makes it accessible for beginners yet powerful enough for complex applications. Its popularity stems from its role as a general-purpose language, fostering rapid development and efficient code maintenance. Python's extensive community support and a rich set of libraries such as NumPy, Pandas, and TensorFlow contribute to its dominance in data-centric applications and emerging technologies. In the IT industry, mastering Python equips professionals with a valuable skill set applicable across a spectrum of domains, making it a go-to language for building scalable, innovative, and robust solutions.

The Program helps you do grow and bloom in Industry and developed by best-in-class industry experts.It offers a blend of online learning with live and recorded lectures along with access to dedicated career support and rewarding job opportunities.

LEARN ONLINE ANYTIME, ANYWHERE

Learn from live masterclasses by top industryleaders and online lab sessions every week, along with 100+ hours of learning content.

WEEKLY ONLINE MENTORSHIPFROM EXPERTS

Get assistance on projects and reinforce the concepts you learn through weekly mentorship sessions.

NETWORK WITH LIKE-MINDED PEERS

Interact with peers from diverse backgroundsand grow your professional network.

DEDICATED PROGRAM SUPPORT

Access dedicated support on your learning journey and resolve for all your queries withhelp from a dedicated Program Manager.

A fresh graduate or a working professional looking to up-skill andbuild a career.

LEARNING PLAN

SCALA

Module1:Introduction to Scala Programming

2.1.Variables and Data Types

- 2.1.1. Numeric, Character, Logical

- 2.1.2. Vectors and Data Structures

2.2.Basic Operations

- 2.2.1. Arithmetic and Logical Operators

- 2.2.2. Data Indexing and Sub setting

Module 2:2: Object-Oriented Programming in Scala

2.1. Classes and Objects

- 2.1.1. Defining Classes

- 2.1.2. Constructors

- 2.1.3. Companion Objects

2.2.Inheritance and Polymorphism

- 2.2.1. Inheritance

- 2.2.2. Overriding Methods

- 2.2.3. Abstract Classes and Traits

2.3.Pattern Matching

- 2.3.1. Pattern Matching Syntax

- 2.3.2. Case Classes

- 2.3.3. Pattern Matching in Collections

Module 3:Functional Programming in Scala

3.1.Introduction to Functional Programming

- 3.1.1. Functional vs. Imperative Programming

- 3.1.2. Pure Functions and Immutability

- 3.1.3. Higher-Order Functions

3.2.Working with Functions

- 3.2.1. Function Literals and Anonymous Functions

- 3.2.2. Closures

- 3.2.3. Currying and Partially Applied Functions

3.3.Collections and Functional Programming

- 3.3.1. Map, Filter, and Reduce

- 3.3.2. For Comprehensions

- 3.3.3. Option and Try for Error Handling

Module 4:Concurrency and Parallelism

4.1.Introduction to Concurrency

- 4.1.1. Threads and Processes

- 4.1.2. Concurrency vs. Parallelism

- 4.1.3. Thread Safety

4.2.Scala's Approach to Concurrency

- 4.2.1. Futures and Promises

- 4.2.2. Actors and Message Passing

- 4.2.3. Thread Pools and Execution Contexts

Module 5:Advanced Scala Topics

5.1.Type System

- 5.1.1. Type Inference

- 5.1.2. Type Bounds and Variance

- 5.1.3. Structural Types

5.2.Implicit Conversions and Parameters

- 5.2.1. Implicit Conversions

- 5.2.2. Implicit Parameters

- 5.2.3. Implicit Classes

5.3.Using Libraries and Frameworks

- 5.3.1. Using Akka for Distributed Systems

5.3.2. Working with Play Framework for Web Development

Module 6:Scala Best Practices and Advanced Topics

6.1.Error Handling and Exception Handling Best Practices

- 6.1.1. Try, Success, and Failure

- 6.1.2. Dealing with Exceptions

6.2.Testing and Debugging Scala Code

- 6.2.1. Unit Testing with ScalaTest

- 6.2.2. Debugging Scala Applications

6.3.Performance Optimization

- 6.3.1. Profiling and Benchmarking

- 6.3.2. Optimizing Code

Module 7:Scala Projects and Real-World Applications

7.1.Building a Scalable Web Application

- 7.1.1. Setting up a Web Application Project

- 7.1.2. Integrating with Databases

- 7.1.3. RESTful API DevelopmentMA

8.3.Shiny Web Applications

7.2.Distributed Systems with Akka

- 7.2.1. Building a Distributed Application

- 7.2.2. Message Passing and Supervision

- 7.3.1. Using Spark for Big Data Processing

- 7.3.2. Analyzing Data Sets

Module 8:Final Project and Course Review

8.1.Capstone Project

- 8.1.1. Project Proposal and Planning

- 8.1.2. Implementation

- 8.1.3. Testing and Deployment

8.2.Course Review and Certification

- 8.2.1. Recap of Key Concepts

- 8.2.2. Assessment and Certification

READY TO ADVANCE YOUR CAREER?

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