

Summitworks Technologies

Welcome Packet

Python, AWS & Front-End
Technologies



About Summitworks

Summitworks Technologies

Summitworks Technologies, Inc. is a global IT Solutions Provider specializing in: Full Life Cycle Project Based Consulting, Selective Outsourcing, and Premium Workforce Solutions. Headquartered in South Plainfield, NJ, Summitworks supports IT initiatives in Software Application/Product Development, Application Re-engineering, Project Management, and Application Maintenance & Support.

With software development centers in United States and offshore, and through onsite consulting, Summitworks provides IT services to clients from coast to coast in the USA. Our highly experienced professionals solve variety of complex problems for the clients, and are involved in developing solutions from concept to reality, utilizing latest technologies and creative algorithms.

Program Overview

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- ❖ 8 weeks of intense classroom & online training Program.
- ❖ You will learn :
 - ✓ Advanced Python with OOPs concept and data structure
 - ✓ Exception Handling, Regular Expressions, MySQL and MongoDB
 - ✓ I/O Handling, Data Management, GUI Programming and Machine Learning Packages
 - ✓ Django framework, ORM, concepts of MVT, session Management, caching and Deployment
 - ✓ Web API, JSON data consumption, Security, Error handling and unit testing using JUnit framework.
 - ✓ Cloud Computing, Amazon EC2, Django Pre-Configured EC2 Servers, Load Balancing, Auto-Scaling, Security and IAM
 - ✓ AWS Object Storage Options, Data Services, VPC, Security, Networking, Route53 and DNS.
 - ✓ Elastic Beanstalk, AWS Simple Email Service(SES), AWS Simple Notification Service (SNS), Simple Queue Service (SQS) and Simple Work Flow (SWF)
 - ✓ AWS Monitoring, auditing, configuration management and other services
 - ✓ Django application deployment to AWS, AWS Cloud Automation using Python Boto3.
 - ✓ Front End technologies including JavaScript, Typescript, Object Pattern and ES6.
 - ✓ Angular JS including Pipes, Routing, Material and Forms.
 - ✓ MEAN Stack including Mongo DB, Express JS, Angular 2 and Node JS.
 - ✓ Live Projects using Web pack and Angular CLI and deployment of project on Azure/AWS Cloud environment.
- ❖ Opportunity to work on Live development projects
- ❖ After hours and weekend assignments, Pair Programming, brainstorming sessions and expert sessions from seasoned professionals.

Daily Schedule

Time	Activity
9:30 am - 11:00 am	Live Sessions We'll introduce new concepts and make you implement what has been taught
11:00 am- 11:15 am	Short Break Just take a coffee break.
11:15 am - 12:00 pm	Continue with the Session
12:00 pm - 1:00 pm	Lunch Break Enjoy lunch with your classmates.
1:00 pm - 2:00 pm	Exercise Enjoy programming on the scheduled exercise
2:00 pm - 4:30 pm	Live Sessions continued

What to expect First day

Onsite candidates:

- ❖ Must be in formals from Monday to Thursday
- ❖ Must bring their own laptop

Online candidates:

- ❖ Needs to register this training program using GoToWebinar link:
<https://attendee.gotowebinar.com/rt/7654547465436411403>
- ❖ There is no specific requirements for OS, they can use Windows machine or Mac OS or Linux.
- ❖ You can use your computer's microphone and speakers, however, a headset is recommended

All candidates:

- ❖ Training starts at 9:30 AM EST and will be winding up around 4:30 PM EST every day Monday to Friday.

First day lunch will be provided to all the Classroom candidates.

Trainer's Bio

Maruthi Lingisetty - Instructor

Maruthi has 10 years of Experience in the field of Training and Development. He has a deep insight to develop computer applications using Python, Django, MongoDB, AWS, Java, J2EE and train the Professionals / Students in the development of latest technical software.

He is Oracle Certified Professional, Java SE 6 Programmer.



Sujatha Coovam - Instructor



Sujatha has experience in working with databases who is fascinated to embark her career in web development which laid the way to join Summitworks. She started her career in Quality Assurance who strives to learn new things made her way to get involved in Web UI development.

Remya Ambika - Instructor

Remya has 10 years of experience in software industries. She started her career as an SEO & Digital Marketing Specialist and switched to Front-end developer to create visually appealing applications with efficient, semantic code. With her experience working in creative industries, her primary goal is to educate students on developing server side applications using Node and Express JS.



Miguel Rangel - Instructor



Miguel has a big passion for web development and design. He always love taking on new challenges and finding ways to make other individuals' ideas succeed. He is a Computer Science Engineer with 5 years of professional experience working in Mexico and 2 years working in USA as a full stack developer using ASP.Net and Azure Cloud technologies.

Navatha Devarapalli - Instructor

Navatha is an enthusiastic, conscientious, detail- oriented agile software programmer with 7+ years of experience in Healthcare and Financial services. Teaching, learning and discussions on technologies is her passion.



Thien Le - Instructor



Thien is a self-motivated and passionate software developer with knowledge in diverse topics in software development. With experience working in networking, telecommunication, and education, he aims to provide students with knowledge which will assist them to succeed in the future career.

Kanchan Patil - Instructor

Kanchan has experience in the areas of Software Consultancy & Development performing System Requirement Study, Analysis, Design and Development. She is self-motivated and passionate to learn new technologies.



Evaluation Process

Online evaluation:

- ❖ Login in to the skype before 9:00 AM EST.
- ❖ We will call you on skype and give you instructions for the evaluation.
- ❖ Candidates must share Skype ID by Thursday, August 22.
- ❖ Make sure your system camera and mic is working.
- ❖ Make sure you have latest version of TeamViewer installed on your system.
- ❖ Candidates must share TeamViewer Presentation.
- ❖ [Click here](#) for TeamViewer installation if needed.
- ❖ Candidates cannot move away from their laptops during the evaluation.

Onsite evaluation:

- ❖ Be on time (9:00 AM EST).
- ❖ You will be not allowed to use internet, not referring to previous assignments, no googling.
- ❖ Once step out from the examination it's not allowed to reenter and take the examination again.

Expectations from you

All candidates must:

- ❖ Review the daily sessions
- ❖ Do daily assignments and submit on time
- ❖ Be active learners
- ❖ Be punctual to class
- ❖ Reach out to us if you have any questions
- ❖ **Candidates who is taking day off should send an email notification to trainers@summitworks.com a day in advance.**

Online candidates must:

- ❖ Turn on your web cameras all time (9:30am-4:30pm).
- ❖ Be online all the time. In case of emergency you should inform all your trainers.
- ❖ Share your screen to trainers in case of help needed.

Python & MySQL Training Syllabus First Week

Day 1: Introduction to Python Language Fundamentals, Flow Control Constructs, Functions and Strings

- Overview of Python Features
- Getting and Installing Python
- Accessing Python Documentation: Python Enhancement
- Compiler and Interpreter
- IDEs and Notebooks
- Using Whitespace to Structure Programs
- Python Comments, Identifiers, Variables and Keywords
- Operators in Python
 - Unary and Binary Arithmetic Operations
 - Comparison and Boolean Operations
 - Identity and Membership Operators
 - Ternary Conditional Operator
 - Order of Operations and Operator Evaluation
- Selection Statement
 - if/elif/else Statements
- Repetition Statements
 - Creating Loops with while and for
 - else after Repetition Statements
 - Loop Modification with break and continue
 - for loop with range() function
 - Pass keyword in flow control statements
- Returning Values with return Statements
- Quotation Marks and Special Characters
- Manipulating Strings with String Methods
- Using the format() Function to Format Strings
- Python Functions
 - Defining Functions
 - Variables and scopes
 - Creating Anonymous Functions
 - Defining Functions with Arguments
 - Defining Flexible Functions that Take Variable Length Arguments
- Lambda Expressions
- Live Examples

Day 2: Collections, Arrays and Dictionaries

- Sequenced Data Structures
 - List
 - Creating and Accessing Lists
 - Manipulating Lists
 - Multiple-Scripted Sequences
 - Operations on List using functions.
 - Sorting
 - Stack ,Queue and deque
 - Tuple
 - Creating and Accessing Tuples
 - Understanding the Differences Between Lists and Tuples
 - Mutable and Immutable

Python & MySQL Training Syllabus First Week

- Set
 - Creating Sets, Performing Set Operations
 - Union, Intersect, Difference
 - Understanding the difference between lists and sets
- Dictionaries
 - Using Dictionaries to Create Data Records
 - Manipulating Dictionaries Using Dictionary Methods
 - Differences Between Sets and Dictionaries
- Understanding List, Dictionary Comprehensions in Python
- Understanding Python Iterators and Generators
 - Iterator Protocol
 - Returning Generator Iterators with the yield Statement
 - Retrieving Iterators with next()
 - Building Your Own Iterator in Python
- Map and Filter with Lambda function
- Live Examples

Day 3: Exception Handling, Object Oriented Programming Concepts and Regular Expressions

- Using Generators to Return Iterators
- Decorators with example
- Enumeration Type and Arrays
- Advanced data structures from collection module
- Difference between Tuple and Named tuple
- Python Exceptions
 - Types of Python Exceptions
 - Handling Exceptions with try/except/finally
 - Triggering Exceptions with raise
 - Defining New Exception Types
 - Implementing Exception Handling in Functions, Methods and Classes
- The Object Oriented Programming Paradigm
 - Introduction
 - Encapsulating Information
 - Static and Instance functions and variables.
 - Self-keyword
 - Special functions
 - Built-in Class Attributes
 - Implementing Class Inheritance
 - Super methods
 - Shallow copy and Deep copy
 - Using Objects in Code
 - Destroying Objects (Garbage Collection)
- Regular Expression
 - Regular Expression Syntax
 - Altering Regular Expression Processing with Regular Expression Modifiers
 - Using Regular Expression Operators

Python & MySQL Training Syllabus First Week

- Scanning Through Strings Using the search() and match() Methods
- Creating Reusable Patterns by Using the compile() Method
- Multiple Matches using findall() function
- Live Examples

Day 4: Introduction to MySQL, Python I/O Handling

- Introduction and MySQL concepts
 - Why to use Database?
 - MySQL Installation
 - What is ER (Entity-relationship) – Modeling?
- Data types
- Keys in SQL
- Database Constraints
- Sub Languages in MySQL
 - Data Definition Language (DDL)
 - Create, Alter, Drop
 - Data Manipulation Language (DML)
 - Insert, Update, Delete
 - Data Query Language (DQL)
 - Select, Show, Help
 - Data Control Language (DCL)
 - Grant and Revoke
- Basic SQL
 - Conditional Statements
 - Where Clause with AND,OR,IN,NOTIN
 - Sorting
 - Orderby
 - Desc
 - Asc
 - Group By Clause
 - Having Clause
- Operators
 - Logical Operators
 - Comparison Operators
- Python File I/O
 - Sending Output to STDOUT Using the print() Method
 - Reading Input with the input() Method
 - Creating File Objects with the open() Method
 - Controlling File Access Modes
 - Working with File Object Attributes
 - Seek() and tell() methods
 - Python OS Module
 - Closing File Objects with the close() Method
 - Reading and Writing to File Objects with read() and write()
- Live Examples

Python & MySQL Training Syllabus First Week

Day 5: Data Management, GUI Programming and Machine Learning Packages

- Best Practices for Data Management
 - Storing Data in Local Databases
 - Discussing and Understanding the DB API
 - Installing Drivers
 - Understanding and Using Common SQL Statements
 - Connecting to a SQL and no SQL Databases
 - Using Cursors to interact with Data from a Database
 - CRUD Operations
 - Invoking a Stored Procedure using python
 - Transaction management
- GUI Programming
 - Tkinter programming
 - Tkinter widgets
 - Standard attributes in Widgets
 - Geometry Management
 - Creating GUI application using class
 - Event Handlers
- Machine Learning Packages in Python
 - Numpy
 - Scipy
 - Pandas
 - Matplotlib
 - Examples
- Project

Day 6: Evaluation

- 3 Hours Evaluation