



**PYTHON, PySpark and
AWS Training Program**

WELCOME PACKET

Welcome to SUMMITWORKS Technologies Inc.

We are a global IT Solutions Provider specializing in:

- *Full Life Cycle Project Based Consulting,*
- *Selective Outsourcing, and*
- *Premium Workforce Solutions.*

We supports IT initiatives for major *Fortune 500 companies* 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, we 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, MongoDB, I/O Handling and Data Management
 - ✓ Apache Spark, PySpark and concepts like RDDs, DataFrames
 - ✓ 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 services
 - ✓ Django application deployment to AWS, AWS Cloud Automation using Python Boto3.
 - ✓ Front End technologies including Typescript and Angular.
 - ✓ Angular including Pipes, Routing, Material and Forms.
 - ✓ 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 do exercises.
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. <i>* First day lunch will be provided to all the Classroom candidates.</i>
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 Your First Week

Onsite candidates:

- ❖ Must be in formal dress attire from Monday to Thursday
- ❖ Must bring your own laptop

Online candidates:

- ❖ Needs to join this training program using webinar which can be register from below link on or before 17th Feb 2020:

<https://attendee.gotowebinar.com/register/2220975410070613260>

- ❖ Once registration is completed, a confirmation email with information on how to join the webinar has been sent to you.
- ❖ You can use your computer's microphone and speakers, however, a headset is recommended
- ❖ Questions or Comments? Contact: trainers@summitworks.com

All candidates:

- ❖ Training starts at 9:30 AM EST and will be winding up around 4:30 PM EST every day Monday to Friday.
- ❖ **Must install** the following software apps before first training day:
 - ✓ *MySQL (Windows/MacOS)*
 - ✓ *Python 3*
 - ✓ *PyCharm*
 - ✓ *Skype*

OUR EXPECTATIONS ARE WORLD CLASS

WE STRIVE TO PLACE OUR EMPLOYEES WITH OUR MAJOR FORTUNE 500 CLIENTS THROUGHOUT THE US. FOR QUALITY ASSURANCE AND TO ENSURE THAT OUR STAFF ARE UP TO DATE USING THE LATEST TECHNOLOGIES, WE CONDUCT AN INTENSIVE EVALUATION PROCESS BY INVITING PEOPLE TO ATTEND THE FIRST WEEK OF OUR OWN IN-HOUSE TRAINING PROGRAM. IF YOU PASS THE EVALUATION EXAM GIVEN AFTER THE FIRST WEEK OF TRAINING, THEN WE WILL INVITE YOU TO CONTINUE WITH OUR FULL 8 WEEK INTENSIVE TRAINING PROGRAM LOCATED AT OUR HEADQUARTERS IN SOUTH PLAINFIELD, NJ.

WE HAVE A HIGHLY DIVERSE AND INTERNATIONAL GROUP OF TRAINERS FROM ALL OVER THE WORLD WHO ARE SEEKING TO ATTRACT THE WORLD'S BEST TALENT. AS TECHNOLOGY GROWS AND EXPANDS TO ALL PARTS OF DAILY LIFE, WE ASPIRE TO BE ON THE FOREFRONT OF TECHNOLOGY GROWTH BECAUSE THIS IS WHAT OUR CLIENT PARTNERS DEMAND.

AS A RESULT, WE STRIVE FOR EXCELLENCE AND TO SEEK THE BEST CANDIDATES FROM AROUND THE WORLD. IN ORDER TO FIND THIS TALENT, WE WILL GO THE EXTRA MILE TO ASSIST YOU WITH OBTAINING WORKING VISAS BECAUSE OUR FORTUNE 500 CLIENTS DEMAND OUR HIGHLY EXPERIENCED PROFESSIONALS TO SOLVE A VARIETY OF COMPLEX PROBLEMS.

Barbara Seidel – Career Counselor



Barbara has a diverse and eclectic background in music, architecture, design, and also new technologies. She began working with us as a Career Counselor Developer after graduating from a Computer Boot Camp where she studied Python, Flask, Django, MySQL, JavaScript, Angular, Express, Node.JS, Mongoose, MongoDB, C#, ASP.NET, MVC, Entity Framework. She strives to develop our candidates to work in areas where they can thrive.

Maruthi Lingisetty – Python/Java/AWS Technologies Instructor



Maruthi has 12 years of Experience in the field of Software Training and Development. He has a deep insight to develop computer applications using Java J2EE Spring Web Services Micro Services Security AWS, Automation, Python, Machine Learning, Django, C++ and MongoDB and train the Professionals and Students in the development of latest technical software.

He is a continuous learner to follow software trends and using advanced tools and techniques to make session more interactive and productive.

Strong passion for training, excellent oral, presentation and organizational skills. Ability to prioritize and plan training curriculum apt for specific IT projects

Experience in Designing Software training programs appropriate to the skills needed for IT Industry. Ability in identifying training objectives, measuring and evaluating program outcomes. Designed, supervised and conducted technical evaluations and rated employees according to their merit.

[He is Java Oracle Certified Professional, Java Standard Edition Programmer.](#)

Kanchan Patil – Python/SQL Technologies 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

Thien Le – Python/DS/ML Technologies Instructor



Thien is a self-motivated and passionate software developer with knowledge in diverse topics in software development such as full-stack web application, data science, machine learning, and cloud computing. He is proficient in Python, MySQL, Angular and AWS. With experience working in networking, telecommunication, and education, he aims to provide students with knowledge, which will assist them to succeed in their future careers.

Remya Ambika – Front End Technologies 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 education students on developing server side applications using Node and Express JS as well as client side application using Angular, JavaScript.

Navatha Devarapalli – Front End Technologies Instructor



Navatha is an enthusiastic, conscientious, detail-oriented, and agile software programmer with 7+ years of experience in Healthcare and Financial services using C#, .Net and React Technologies.

Teaching, learning and technology discussions are her passions.

Sujatha Coovam – Microsoft Technologies Instructor



"Skilled and knowledgeable Technical Trainer with several years of experience in educating both experienced professionals and less-experienced aspirants in Information Technology. Adept at teaching Microsoft technologies such as [ASP.NET](#) MVC, ASP.Net Core Entity Framework and MS SQL Server database.

Possesses deep understanding of Microsoft based systems and can provide training at an advanced level. Highly experienced in conducting classroom training sessions, webinars and informal Q&A sessions for trainees/candidates.

Conducts personnel evaluations of the candidates to determine expertise, accomplishments and assess training requirements. Designs the training programs based on the candidate's skill level.

A dynamic communicator with excellent presentation skills and possess the ability to communicate the complex concepts in an understandable manner using creative teaching methods. Good in preparing the candidates to produce quality work across different domains."

Miguel Rangel – Microsoft Technologies Instructor



Miguel has a big passion for web development and design. He always loves 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 as well as 2 years working in USA as a full stack developer using ASP.Net and Azure Cloud technologies.

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 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
- Live Examples

Python & MySQL Training Syllabus First Week

Day 2: Functions, Collections, Arrays and Dictionaries

- Python Functions
 - Defining Functions
 - Variables and scopes
 - Creating Anonymous Functions
 - Defining Functions with Arguments
 - Defining Flexible Functions that Take Variable Length Arguments
- 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
 - 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
 - Live Examples

Python & MySQL Training Syllabus First Week

Day 3: Advanced Data Structures and Object Oriented Programming Concepts

- Understanding Python Iterators and Generators
 - Iterator Protocol
 - Returning Generator Iterators with the yield Statement
 - Retrieving Iterators with next()
 - Building Your Own Iterator in Python
- Lambda Expressions
- Map and Filter with Lambda function
- Using Generators to Return Iterators
- Decorators with example
- Enumeration Type and Arrays
- Advanced data structures from collection module
- 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)
 - Live Example

Python & MySQL Training Syllabus First Week

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

- 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
- Live Examples

Python & MySQL Training Syllabus First Week

- 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()
- 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
- Live Examples
- Project

Python & MySQL Training Syllabus First Week

Day 5: Python with Database

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

Live Examples

Day 6: Evaluation

- 3 Hours Evaluation

WHAT TO EXPECT ON DAY 6

THE EVALUATION PROCESS

The Evaluation Process:

- ❖ Login in to the skype or TeamViewer before 9:30 AM EST.
- ❖ We will call you in the skype and give you instructions for the evaluation.
- ❖ Candidates must share Skype ID or TeamViewer meeting ID.
- ❖ Make sure your system camera and mic is working.
- ❖ Make sure you have latest version of Skype and TeamViewer installed in your system.
- ❖ Candidates must share TeamViewer Presentation
- ❖ [Click here](#) for TeamViewer installation if needed.
- ❖ Candidates **cannot move away** from their laptops.

Onsite evaluation:

- ❖ Be on time (9:30 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.