INTERN MEETS Syllabus

Module 1 Python Basic

Introduction To Python

- Why Python , its Unique Feature and where to use it?
- Python environment Setup
- Discuss about IDE's like IDLE, Pycharm and Enthought Canopy
- Start programming on interactive shell.
- Python Identifiers, Keywords
- Discussion about installed module s and packages
- Access Command line arguments within programs

Python Data Types

- Declaring and using Numeric data types: int, float, complex
- Using string data type and string operations
- Defining list and list slicing
- Use of Tuple data type

Python Exception Handling

- Avoiding code break using exception handling
- Safe guarding file operation using exception handling
- Handling and helping developer with error code
- Programming using Exception handling

Python Program Flow Control

- Conditional blocks using if, else and elif
- Simple for loops in python
- For loop using ranges, string, list and dictionaries
- Use of while loops in python
- Loop manipulation using pass, continue, break and else
- Programming using Python conditional and loops block

Python Functions , Modules And Packages

- Organizing python codes using functions

- Organizing python projects into modules
- Importing own module as well as external modules
- Understanding Packages
- Powerful Lamda function in python
- Programming using functions,modules & external packages

Python File Operation

- Reading config files in python
- Writing log files in python
- Understanding read functions, read(), readline() and readlines()
- Understanding write functions, write() and writelines()
- Manipulating file pointer using seek
- Programming using file operations

Python Object Oriented Programming – Oops

- Concept of class, object and instances
- Constructor, class attributes and destructors
- Real time use of class in live projects
- Inheritance , overlapping and overloading operators
- Adding and retrieving dynamic attributes of classes
- Programming using Oops support

Module 2 Python advance

Machine Learning

- Machine learning: the problem setting
- Loading an example dataset
- Learning and predicting
- linear regression
- Decision tree implementation
-

Contacting User Through Emails Using Python

- Installing smtp python module
- Sending email
- Reading from file and sending emails to all users addressing them directly for marketing

Python Database Interaction

- SQL Database connection using python
- Creating and searching tables
- Reading and storing config information on database
- Programming using database connections

Data analysis

- Numpy Intro

- Arrays, Datatypes
- Matrices
- Broadcasting
- Pandas Intro
- series
- Data Frames
- Merge, Join, Concatenate
- Handling missing data
- IO Tools, Text, CSV, HDF5, JSON, EXCEL
- Plotting
- Matplotlib Intro
- Line plot
- Bar charts
- Histograms
- Scatter Plot

Debugging Python Programs

- Debug Python programs using pdb debugger
- Assert for debugging
- Testing with Python using UnitTest
- Iterable and generator in Python
- Yielding from the generators
- Standard project setup in Python

Multithreading

- Multithreading with Python
- What is multithreading?
- Starting a New Thread
- The Threading Module
- Synchronizing Threads

Package Installation and Windows spreadsheet parsing

- What is pip, easy_install?
- Set up the environment to install packages?
- Install packages for XLS interface, Database Interface and Web interface
- XML and XLS parsing with Python
- Create XLS reports with Python

Module 3 advance premium

Django Syllabus

- Introduction to Django
- Difference between a App and Project.
- What are Migrations and Why we do that.
- Admin part (How to create Superuser in python).
- What are Views in Django URL Routing.
- What is Render and relative import.
- A overview of settings file in Django.
- How to configure Template.
- What are models.
- Models are Admin Linkup.
- Modelform creation.
- Form Validation.
- What is Context in Django.
- Form in a View.
- Custom Form.
- How to setup Email in our Projects.
- Static Files and Serving Static Files in Django.
- Bootstrap Grid System.
- Idea of CSS and Blocks.
- URL names as Links.
- How to add Authentication in Django Project with help of Registration Redux module.
- Authentication Links in Navigation Bar.
- Add Login Form in Bootstrap.
- Query Set Basics.
- How to render images and Videos on our site.

Angular 8 and above - Full Stack Development - Latest Version

- Typescript Deep Dive-Type Script Architecture
- Introduction To Angular
- Setting Up Environment For Angular
- Angular Architecture
- introduction to components
- Angular Pipes
- Angular Services
- Angular Forms
- NG Modules
- Unit Testing In Angular