RDX

Rocket Data Analytics operates as an affiliate of Data Minds Analytics pvt ltd

Python Full Stack

Professional Course

In Collaboration with

futureskills prime

A MeitY - NASSCOM Digital Skilling Initiative

LIVE

CLASSROOM
ONLINE
HYBRID MODEL

3 MONTHS- Certificate Course

MODULE 01

PYTHON PROGRAMMING

FUNDAMENTALS

Python - Basics

- Historical Context
- Python Installation
- Overview of Integrated
- Development Environments (IDEs)
- Basics: Identifiers, Statements,
- Comments, Variables
- Memory Management
- Types of Data Types
- Integers,Float,Complex,
- Boolean,String
- Operators :
- Arithmetic,Relational,
- Logical,Assignment,Bitwise

Input, Output, and Import

- Python Input and Output
- Importing Modules

Namespaces and Scope

- Python Namespace and Scope
- Global, Local, and
- Non-local Variables

Control Flow

- Python Flow Control Statements
- if Statement
- if-else Statement
- if-elif-else Statement
- Nested if Statement
- for Loop
- while Loop
- break, continue &
- pass Statements

Date and Time

- Working with Dates and Times
- Formatting Dates and Times
- Current Date and Time
- Timestamps to Datetime Conversion
- Timing Functions with the
- time Module
- Introducing the sleep Function

DATA STRUCTURES

Lists-Inroduction

- Creating and accessing elements
- List Operations
- Modifying, appending
- deleting elements
- List comprehensions

Tuples-Inroduction

- Tuple Operations:
- Accessing elements
- Concatenation and repetition

Sets - Introduction

- Set Operations:
- Intersection, union, and difference
- Membership testing

Dictionaries -Introduction

- Key-value pairs and uniqueness.
- Creating and accessing elements.
- Dictionary Operations:
- Modifying, deleting, and
- iterating over elements.
- Dictionary comprehensions

String Basics

- String manipulation methods.
- String Operations:
- Concatenation, slicing, and formatting
- Common string functions

ADVANCE

Functions

- Python Functions
- Defining and Calling Functions
- Global Keyword
- Function Arguments
- Recursion
- Anonymous (Lambda) Functions
- Modules and Packages
- Working with random Module
- Working with math Module
- Documenting Functions
- (Docstrings)
- User-Defined Functions

File Handling

- File Input and Output (I/O)
- File Handling Techniques
- Working with Directories
- Handling Exceptions with Files
- User-Defined Exceptions

Object-Oriented Program

- OOP Concepts
- Classes and Objects
- Inheritance
- Operator Overloading

Advanced Topics

- Iterators
- Generators
- Closures
- Decorators
- -*args and **kwargs
- Properties
- Regular Expressions (RegEx)

MODULE 02

PYTHON ANALYTICS

NUMPY

Introduction to NumPy
- What is NumPy?
- History of NumPy

Understanding ndarrays
- What is an ndarray (N-dimensional array)?
- Creating NumPy arrays
- Array functions
- Numerical arrays
- Homogeneous arrays
- Diagonal arrays
- Random number generation with NumPy

Array Attributes
- Overview of array attributes
- Exploring and understanding
- array attributes

Multi-Dimensional Arrays
- Creating multi-dimensional arrays
- Extracting data from
- multi-dimensional arrays

Indexing and Slicing
- Basics of indexing
- Basics of slicing
- Boolean indexing
- Random indexing

Reshaping and Resizing
- Reshaping arrays
- Resizing arrays
- Transposing arrays

Vector Operations & Array Functions
- Vector multiplication
- Array operations
- Broadcasting rules

PANDAS

Introduction to Pandas
- What is Pandas?
- History and evolution of Pandas

Series and DataFrames
- Introduction to Series and DataFrames
- Creating Series and DataFrames
- Essential operations on Series and DataFrames

Data Structures in Pandas
- Understanding the various data structures in Pandas
- Working with Series, DataFrame, and Index objects

Data Manipulation with Pandas
- Loading and saving data in
- different formats (CSV, Excel, SQL)
- Data cleaning and handling missing values
- Data transformation and manipulation techniques

Indexing and Selection
- Basics of indexing and selecting data in Pandas
- Advanced indexing techniques
- Boolean indexing

Grouping and Aggregation
- Grouping data with Pandas
- Aggregating data using different functions
- Transformations and filtering within groups

Merging and Joining DataFrames
- Combining DataFrames using merge and join operations
- Concatenating DataFrames

Time Series Analysis with Pandas
- Handling time and date data
- Resampling and frequency conversion
- Time shifting and lagging

Data Visualization with Pandas:
- Plotting with Pandas
- Exploratory data analysis using visualizations

Advanced Topics in Pandas:
- Handling categorical data

MODULE 03

DATA VISUALIZATION

MATPLOTLIB

Overview of Matplotlib

Matplotlib Basics

- Installing Matplotlib
- Basic plotting with Matplotlib
- Line plots, scatter plots, and bar plots

Customizing Matplotlib Plots

- Adding titles and labels
- Setting colors and styles
- Adding legends and annotations

Multiple Plots and Subplots

- Creating multiple plots in a single figure
- Working with subplots

Advanced Matplotlib Plots:

- Histograms
- Box plots
- Pie charts
- 3D plots
- Violin plots

SEABORN

Overview of Matplotlib

Seaborn Introduction

- Installing Seaborn
- Overview of Seaborn's capabilities

Seaborn Plots for Univariate Data

- Distplot for distribution visualization
- Countplot for categorical data
- Boxplot and violin plot for summarizing distributions

Seaborn Plots for Bivariate Data:

- Scatter plots and regression plots
- Pair plots for pairwise relationships
- Heatmaps for correlation visualization

Styling and Customization in Seaborn

- Themes and color palettes
- Customizing Seaborn plots

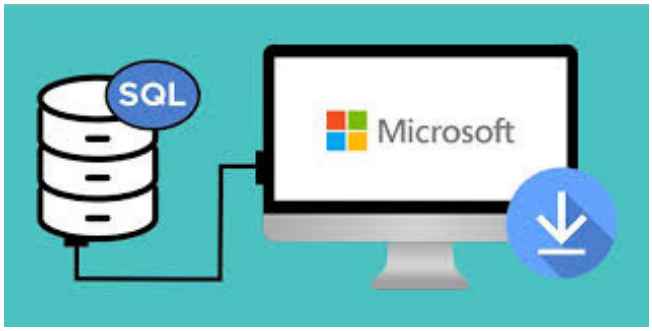
Additional Seaborn Features

- FacetGrid for multi-plot grids
- Categorical plots for complex categorical relationships

Real-world Data Visualizations

31. Python Database

- What is Database
- Why Database
- What is SQL
- How to install MySQL Database
- MySQL Connection
- Guide Operators,
- Data Types Constraints
- Primary key
- Foreign Key
- Unique Key
- Null Key



MySQL DDL

- Create
- Alter
- Truncate
- Rename
- Drop

MySQL DML

- Insert
- Select
- Update
- Delete

MYSQL DCL

- Grant
- Revoke

MySQL TCL

- Commit
- Rollback
- Save point

Working with Clause

- Where
- Orderby
- Having
- From
- Distinct
- GroupBy
- Having

Joins

- Inner join
- Outer join
- Cross join
- Full Join

PYTHON PROGRAMMING

Web Development(HTML,CSS, JS and Bootstrap)

1. BASIC HTML

- Introduction HTML
- Getting Started
- HTML Elements
- HTML Attributes
- HTML Headings
- HTML Paragraphs
- HTML Links
- HTML Text Formatting
- HTML Styles
- HTML Images
- HTML Tables
- HTML Lists
- HTML Form
- HTML Iframes

2. HTML ADVANCED

- HTML Doctypes
- HTML Layout
- HTML Head
- HTML Meta
- HTML Scripts
- HTML Entities
- HTML URL
- HTML URL Encode HTML Validation

3.HTML5 FEATURES

- HTML5 New Input Types
- HTML5 Canvas
- HTML5 SVG
- HTML5 Audio
- HTML5 Video
- HTML5 Web Storage
- HTML5 Application Cache
- HTML5 Web Workers
- HTML5 SSE
- HTML5 Geolocation
- HTML5 Drag & Drop

4. CSS BASIC

- CSS Introduction
- CSS Getting Started
- CSS Syntax
- CSS Selectors
- CSS Color
- CSS Background
- CSS Fonts
- CSS Text
- CSS Links
- CSS Lists
- CSS Tables

5. CSS BOX MODEL

- CSS Box Model
- CSS Dimension
- CSS Padding
- CSS Border
- CSS Margin

6. ADVANCED CSS

- CSS Outline
- CSS Cursors
- CSS Overflow

PYTHON PROGRAMMING

Web Development(HTML,CSS, JS and Bootstrap)

CSS

- CSS Units
- CSS Visual Formatting
- CSS Display
- CSS Visibility
- CSS Position
- CSS Layers
- CSS Float
- CSS Alignment
- CSS Pseudo-classes
- CSS Pseudo-elements
- CSS Media Types
- CSS Sprites
- CSS Opacity
- CSS Attribute Selectors
- CSS Validation

MODULE 03

7. JAVASCRIPT

JavaScript Basic

- JS Introduction
- JS Getting Started
- JS Syntax
- JS Variables
- JS Generating Output
- JS Data Types
- JS Operators
- JS Events
- JS Strings
- JS Numbers
- JS If…Else
- JS Switch…Case
- JS Arrays
- JS Sorting Arrays
- JS Loops
- JS Functions
- JS Objects

JavaScript & Dom

- JS DOM Nodes
- JS DOM Selectors
- JS DOM Styling
- JS DOM Get Set Attributes
- JS DOM Manipulation
- JS DOM Navigation

JavaScript & Bom

- JS Window
- JS Screen
- JS Location
- JS History
- JS Navigator
- JS Dialog Boxes
- JS Timers

JavaScript Advance

- JS Date and Time
- JS Math Operations
- JS Type Conversions
- JS Event Listeners
- JS Event Propagation
- JS Borrowing Methods
- JS Hoisting Behavior
- JS Closures
- JS Strict Mode
- JS JSON Parsing
- JS Error Handling
- JS Regular
- Expressions
- JS Form Validation
- JS Cookies

8 . BOOTSTRAP 5

- Bootstrap Introduction
- Bootstrap Getting Started
- Bootstrap Containers
- Bootstrap Grid System

PYTHON PROGRAMMING

Web Development(HTML,CSS, JS and Bootstrap)

- Bootstrap Fixed Layout
- Bootstrap Fluid Layout
- Bootstrap Responsive Layout
- Bootstrap Typography
- Bootstrap Tables

- Bootstrap Lists
- Bootstrap List Groups
- Bootstrap Forms
- Bootstrap Custom Forms

- Bootstrap Input Groups
- Bootstrap Buttons
- Bootstrap Button Groups
- Bootstrap Images
- Bootstrap Cards
- Bootstrap Media Objects

- Bootstrap Icons
- Bootstrap Navs
- Bootstrap Navbar
- Bootstrap Accordion
- Bootstrap Breadcrumbs
- Bootstrap Pagination

- Bootstrap Badges
- Bootstrap Progress Bars
- Bootstrap Spinners
- Bootstrap Jumbotron

9. Angular JS

- Introduction to typescript What is typescript
- How to install and develop the typescript
- What is Transpirations
- Installing of NodeJS
- How to install angular framework How to create an application
- File and folder structure of angular application

Working with one way data binding

1. Interpolation
2. data binding
3. Property binding
4. Class binding
5. d.Style binding
6. Event binding

- Working with Two-way data binding
- Working with custom component
- Integrating bootstrap in angular
- Working with *ngFor and *ngIf and *ngSwitch
- Working with predefine pipes
- Working with custom pipes
- Working with unit testing in angular
- Working with Routing in Angular

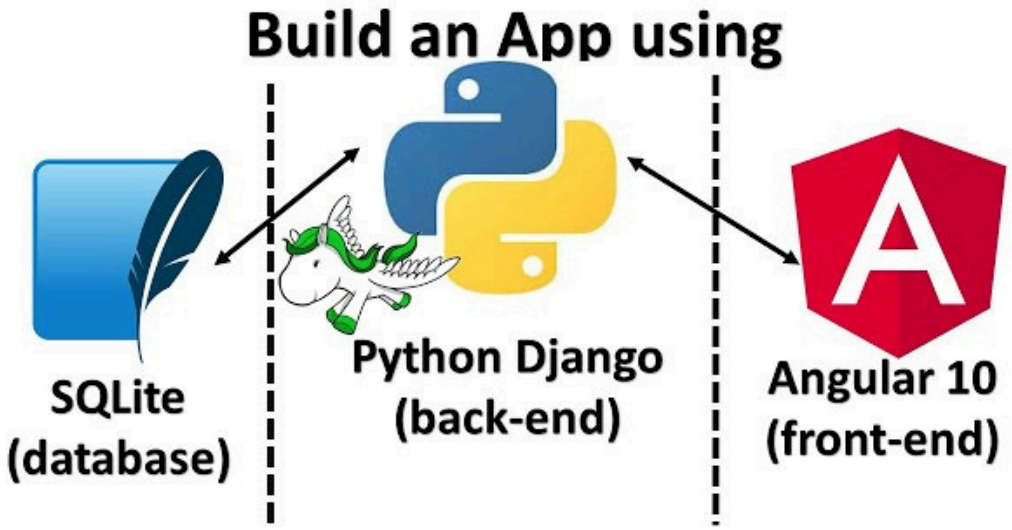
10. Django Frame Work

- Architecture MVT Pattern & Advantage and Disadvantages Architecture MVT Pattern
- MVT Pattern Model View Template Architecture
- Django Architecture
- What is Advantages and Disadvantage Django?
- Django Software Requirements

Django Install

Django Introduction

- Creating Models Creation, MySQL Integration
- Creating Admin Panel
- Panel Customizations in Django
- Show(Display) Information and Details in Dynamic Template(HTML)
- Using URLS
- Creating Model Forms CRUD Operation (Add ITEM, Update ITEM , Delete ITEM By ID primary key)
- Advance Query from Database Using Filter, Order By, Sorting, Count Method
- Creating custom pagination from Scratch
- Search Functionality by using the Query Database By Search and get Search Results Creating Authentication | Login & Registration System



ABOUT US

Rocket Data Analytics operates as an affiliate of Data Minds Analytics pvt ltd

Our professional courses are instructed by industry experts actively engaged in real-time practices, utilizing the latest teaching tools and techniques. The combination of our Learning Management System (LMS) and dedicated support mentors constitutes key elements that facilitate easy and simplified learning

- 3000 + Successfully trained students
- 1056 + Facilitated career transitions
- 10+ Industry 4.0 diverse range of Digital Transformation courses
- Flexible training options, including Classroom, Online, E-Learning, and Corporate Trainings.

DATA MINDS ANALYTICS PVT LTD

PROFESSIONAL COURSES

- Data Science
- Data Analytics
- Data Engineering
- Gen - AI
- Block Chain
- Artificial Intelligence
- Python Full Stack
- Java Full Stack
- R Language
- Power BI / Apps
- Aws / Devops
- Azure Cloud
- Cyber Security
- ERP - SAP
- Digital Marketing

Our Collaborations & Placements

We foster meaningful collaborations with industry partners to enhance opportunities for our students. Our commitment to facilitating placements ensures that our graduates seamlessly transition into promising career paths, establishing a strong foundation for their professional journey.

accenture, ADP, amazon, cognizant, Deloitte., Emirates NBD, EY, genpact, Google, HSBC, ICICI Bank, Infosys, SRINSOFT, FIRSTTECH consulting, JioMart, datarun.in, MPM Properties, Internstime, KPMG, IBM