

# **GAMAKA**

**Artificial Intelligence Solutions**

Kothrud Branch: Office No 309, Paranjape – The Business Hub, Karve Road, Kothrud, Pune  
Wakad Branch: 203, dnyanbod apartment, Chatrapati chowk, Kaspate Vasti Wakad, Pune  
Email: [itplacements@gamakaai.com](mailto:itplacements@gamakaai.com) Cell: 91-7378483656. WhatsApp: 91-7378493293  
[www.gamakaai.com](http://www.gamakaai.com)

---

## **Target audience**

- Freshers from BCA, BCS, BE, BTech, MTech, MCA. MCS
- Final Year/Internship projects for BCA, BCS, BE, BTech, MTech, MCA. MCS
- Non-IT Professionals who've worked mostly with tools like Excel and want to learn how to use Python for statistical analysis.
- Business Analyst
- IT Project Managers
- MBA Graduates or business professionals who are looking to move to a heavily quantitative role.
- Engineering Graduate/Professionals who want to understand basic statistics and lay a foundation for a career in Data Science

Kothrud Branch: Office No 309, Paranjape – The Business Hub, Karve Road, Kothrud, Pune  
Wakad Branch: 203, dnyanbod apartment, Chatrapati chowk, Kaspate Vasti Wakad, Pune  
Email: [itplacements@gamakaai.com](mailto:itplacements@gamakaai.com) Cell: 91-7378483656. WhatsApp: 91-7378493293  
[www.gamakaai.com](http://www.gamakaai.com)

---

## Python – Basics & Advanced

Duration: 40 Hours with hands on tutorials

Mode of training: Online/Offline(classroom)/Combo (Offline & Online)

### Introduction & Setup

- What is Python and history of Python?
- Why Python and where to use it?
- Discussion about Python 2 and Python 3
- Set up Python environment for development
- Discuss about IDE's like IDLE, Pycharm and Enthought Canopy
- Discussion about unique feature of Python
- Introduction to Anaconda Distribution
- What is Anaconda Distribution?
- How to install Anaconda?
- conda repository
- Anaconda Navigator
- pip and conda to get new package
- pip and conda commands
- set Virtual

### Scripting

- First "Hello World" Python Program
- Start programming on interactive shell.
- Using Variables, Keywords
- Interactive and Programming techniques
- Comments and document interlude in Python

### Functional Programming

- Python Core Objects and built-in functions
- Number Object and operations
- String Object and Operations
- List Object and Operations
- Tuple Object and operations
- Dictionary Object and operations
- Set object and operations
- Boolean Object and None Object
- Different data Structures, data processing
- Map, Filter & Reduce
- List Comprehension
- Generators & Yields

### Conditional Statements and Loops

- What are conditional statements?
- How to use the indentations for defining if, else, elif block
- What are loops?
- How to control the loops, infinite loops
- How to iterate through the various object
- Sequence and iterable objects

### UDF Functions and Object Functions

- What are various type of functions
- Create UDF functions
- Parameterize UDF function, through named and unnamed parameters
- Defining and calling Function
- Anonymous Functions - Lambda Functions
- String Object functions
- List and Tuple Object functions
- Dictionary Object functions

## File Handling with Python

- Process text files using Python
- Read/write and Append file object
- File object functions
- File pointer and seek the pointer
- Truncate the file content and append dataFile test operations using os.path

## Packages & Modules

- Python inbuilt Modules
- os, sys, datetime, time, random, zip modules
- Create Python UDM – User Defined Modules
- Define PYTHONPATH
- Create Python Packages
- init File for package initialization

## Exceptional Handling and Object Oriented Python

- Python Exceptions Handling
- What is Exception?
- Handling various exceptions using try....except...else
- Try-finally clause
- Argument of an Exception and create self exception class
- Python Standard Exceptions
- Raising an exceptions, User-Defined Exceptions
- Object oriented features
- Understand real world examples on OOP
- Implement Object oriented with Python
- Creating Classes and Objects, Destroying Objects
- Accessing attributes, Built-In Class Attributes
- Inheritance and Polymorphism
- Overriding Methods, Data Hiding\
- Overloading Operators

## Advanced Topics

- Decorators
- Managed Attributes
- Unicode & Byte String
- Metaclasses
- Generators
- Descriptors

## Debugging, Framework & Regular expression

- Debug Python programs using pdb debugger
- Pycharm Debugger
- Assert statement for debugging
- Testing with Python using unittest Framework
- What are regular expressions?
- The match and search Function
- Compile and matching
- Matching vs searching
- Search and Replace feature using RE
- Extended Regular Expressions
- Wildcard characters and work with them

## Database interaction with Python

- Creating a Database with SQLite 3,
- CRUD Operations,
- Creating a Database Object.
- DML and DDL Operations with Databases
- Performing Transactions

# **GAMAKA**

**Artificial Intelligence Solutions**

Kothrud Branch: Office No 309, Paranjape – The Business Hub, Karve Road, Kothrud, Pune

Wakad Branch: 203, dnyanbod apartment, Chatrapati chowk, Kaspate Vasti Wakad, Pune

Email: [itplacements@gamakaai.com](mailto:itplacements@gamakaai.com) Cell: 91-7378483656. WhatsApp: 91-7378493293

[www.gamakaai.com](http://www.gamakaai.com)

---

- Python MySQL Database Access
- Handling Database Errors

## **Python Libraries**

- Numpy
- SciPy
- Stats Model
- Pandas