



CODE NEST INSTITUTE

LEARN CODE. LEAD FUTURE.

AI + PYTHON DEVELOPER

Build your foundation in Python, SQL, APIs and Practical AI application development.



DURATION
4 Months



TARGET AUDIENCE
Students, Graduates,
Freshers & Beginners



MODE
Classroom
Training



PROJECT FOCUSED
Practical Projects
& Real-world Learning



ABOUT THE COURSE

A practical beginner-friendly pathway to learn Python and understand how modern AI is used to build useful applications. The course focuses on strong fundamentals first, then gradually introduces AI concepts and hands-on development.

**“ Learn the foundation.
Understand the technology.
Build practical applications.**



WHAT YOU WILL LEARN

- ✓ Python Programming from Basics to Advanced Concepts
- ✓ SQL Databases and Python Database Connectivity
- ✓ APIs and Real-world Application Integration
- ✓ AI, Machine Learning and Generative AI Fundamentals
- ✓ Build AI-powered Applications using Python
- ✓ Work on Real-time Projects and Practical Workflows



WHO SHOULD JOIN?

- Students who want to start their career in AI & Python
- Graduates & Freshers looking for a high-growth career
- Beginners with no prior programming background
- Anyone interested in building AI-powered applications



14-MODULE CURRICULUM

- Python Basics**
Variables, data types, operators, conditions, loops and basic problem solving.
- Python Programming**
Functions, lists, tuples, dictionaries, strings and modules.
- OOP in Python**
Classes, objects, inheritance, polymorphism and encapsulation.
- File & Error Handling**
Files, exceptions, JSON and CSV handling.
- Python Libraries**
NumPy, Pandas and practical data processing.
- SQL Basics**
Databases, tables, SELECT, JOIN, GROUP BY and subqueries.
- Python + SQL**
Connect Python to a database and perform CRUD operations.

- Python + API**
REST API concepts, JSON, GET/POST and calling APIs from Python.
- AI Fundamentals**
AI, Machine Learning, Generative AI and LLM concepts explained clearly.
- Generative AI Basics**
ChatGPT, prompts, tokens, context, capabilities and limitations.
- Python + AI**
Call AI APIs from Python, send prompts and process AI responses.
- AI Application Basics**
Build simple AI-powered applications using practical Python workflows.
- Basic Machine Learning**
ML concepts, training/testing, regression and classification fundamentals.
- Projects**
Practical Python + AI projects including a final AI application project.



PRACTICAL PROJECTS

- AI Chatbot**
Python + AI API integration and conversational flow.
- AI Text Summarizer**
Prompting and processing AI-generated responses.
- AI Resume Analyzer**
Extract, analyze and summarize resume content.
- AI Q&A Application**
Ask questions and generate useful AI responses.
- Python Employee Management System**
Python programming, OOP, CRUD and application structure.
- Python + SQL Application**
Database connectivity, queries and CRUD operations.
- Final AI Project**
A complete practical application combining Python fundamentals with AI capabilities.



LEARNING OUTCOMES

- ✓ Build a solid foundation in Python programming and problem solving.
- ✓ Work with SQL databases and connect Python applications to data.
- ✓ Understand APIs and integrate external services into Python applications.
- ✓ Understand AI, Machine Learning, Generative AI and LLM concepts without unnecessary advanced theory.
- ✓ Build basic AI-powered applications using Python and AI APIs.



WHERE THIS COURSE LEADS



AI + Python
Developer



AI Application
Developer



AI Full Stack
Developer



Agentic AI
Developer

A strong entry point for learners who want to progress into AI application development, AI Full Stack Development, or advanced Agentic AI learning later.



EXPERT TRAINERS
Industry experienced
trainers



PRACTICAL LEARNING
Hands-on coding &
real-world projects



CAREER SUPPORT
Guidance for your
AI career journey

BOOK YOUR SEAT TODAY!

Start your journey to become an
AI + Python Developer.

