05 YEARS OF EXCELLENCE

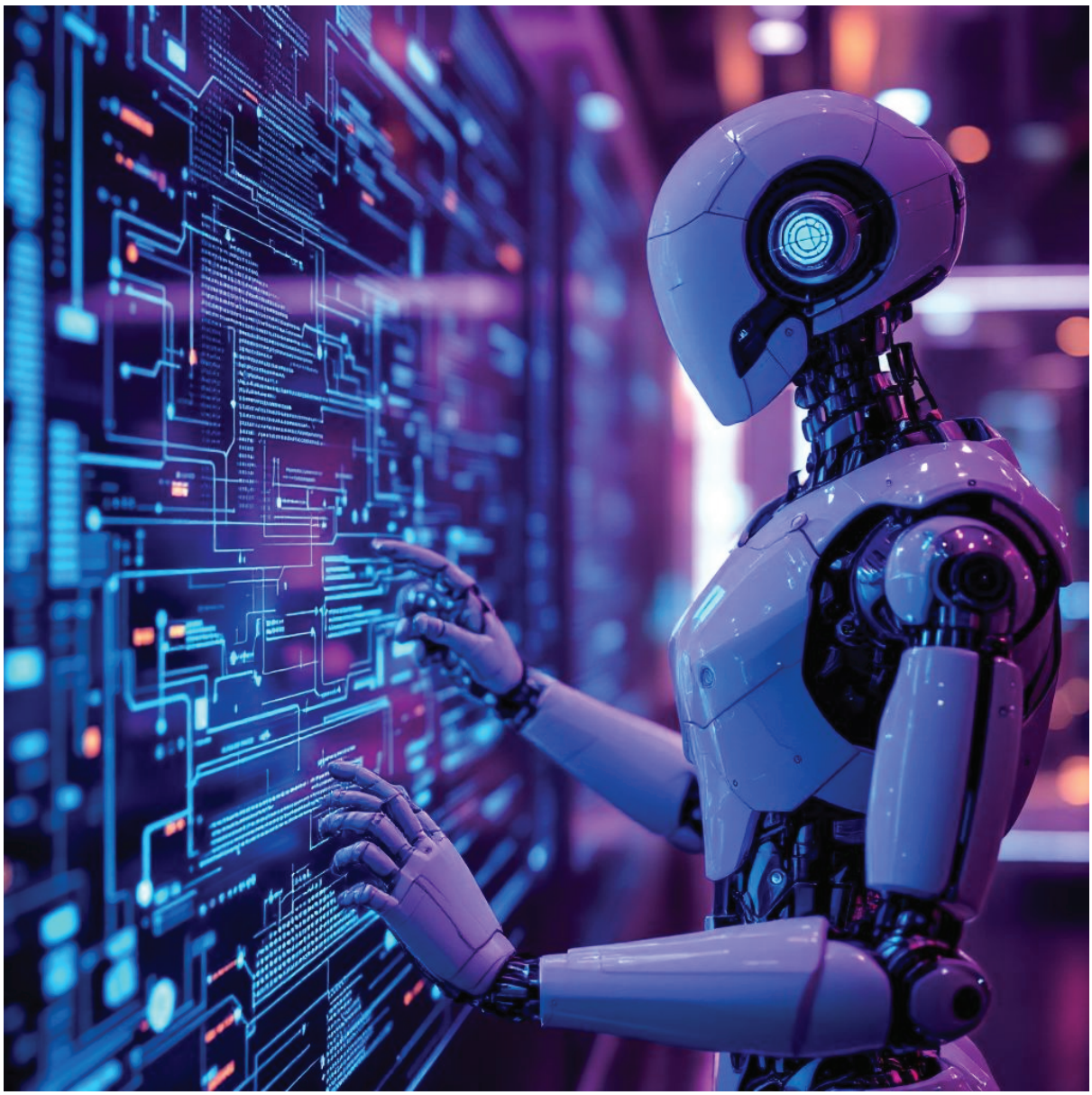
NEXSKILL

Training - Freelancing - Placement

PRESIDENT AWARD WINNER

AGENTIC AI

08 MONTHS DURATION



POWERED BY

OZI Group

ABOUT NEXSKILL

Nexskill is Pakistan's No. 1 IT Trainings Institute, a Presidential Award Winner and Powered by OZI Group, dedicated to equipping individuals with job-ready skills for the evolving Tech Industry. Our Mission is to be the Gateway to Becoming a Proficient Technology Expert, delivering Trainings for Career Success.

With over 10,000+ graduates and 100+ courses, Nexskill consistently demonstrates its commitment to excellence and innovation by offering an industry-aligned curriculum. Our vision is to bridge the gap between technology and skills globally, empowering the next generation to thrive in today' s competitive job market.



ABOUT OZI GROUP

Ozi Group, as the largest private incubator, plays a pivotal role in supporting Nexskill's graduates to access employment opportunities and launch successful careers. Through our extensive ecosystem, we provide resources, mentorship, and networking opportunities to empower individuals trained by Nexskill to thrive in their chosen fields.

By bridging the gap between education and employment, Ozi Group ensures that Nexskill's graduates have the support they need to transition seamlessly into the workforce and achieve their professional aspirations.



JOB PLACEMENT CELL

At Nexskill, we believe in more than just providing education; we believe in transforminglives. Our commitment to excellence in IT training extends beyond the classroom, eaching into the heart of career development through our unparalleled Job Placement Cell

What sets Nexskill apart is our holistic approach to education. We don't just equip our students with technical knowledge; we empower them with the skills necessary to thrive in the corporate sector. From effective communication to professional etiquette, we ensure that our graduates are ready to excel in any professional environment

Join us as we empower futures and shape the next generation of IT leaders. With Nexskill, the journey to success begins here.

facebook.com/NexskillSuccess Stories

Nexskill proudly boasts over **5,000** Success Stories of individuals who have Transformed their Careers. Their remarkable journeys reflect Successful Career Growth and Empower-



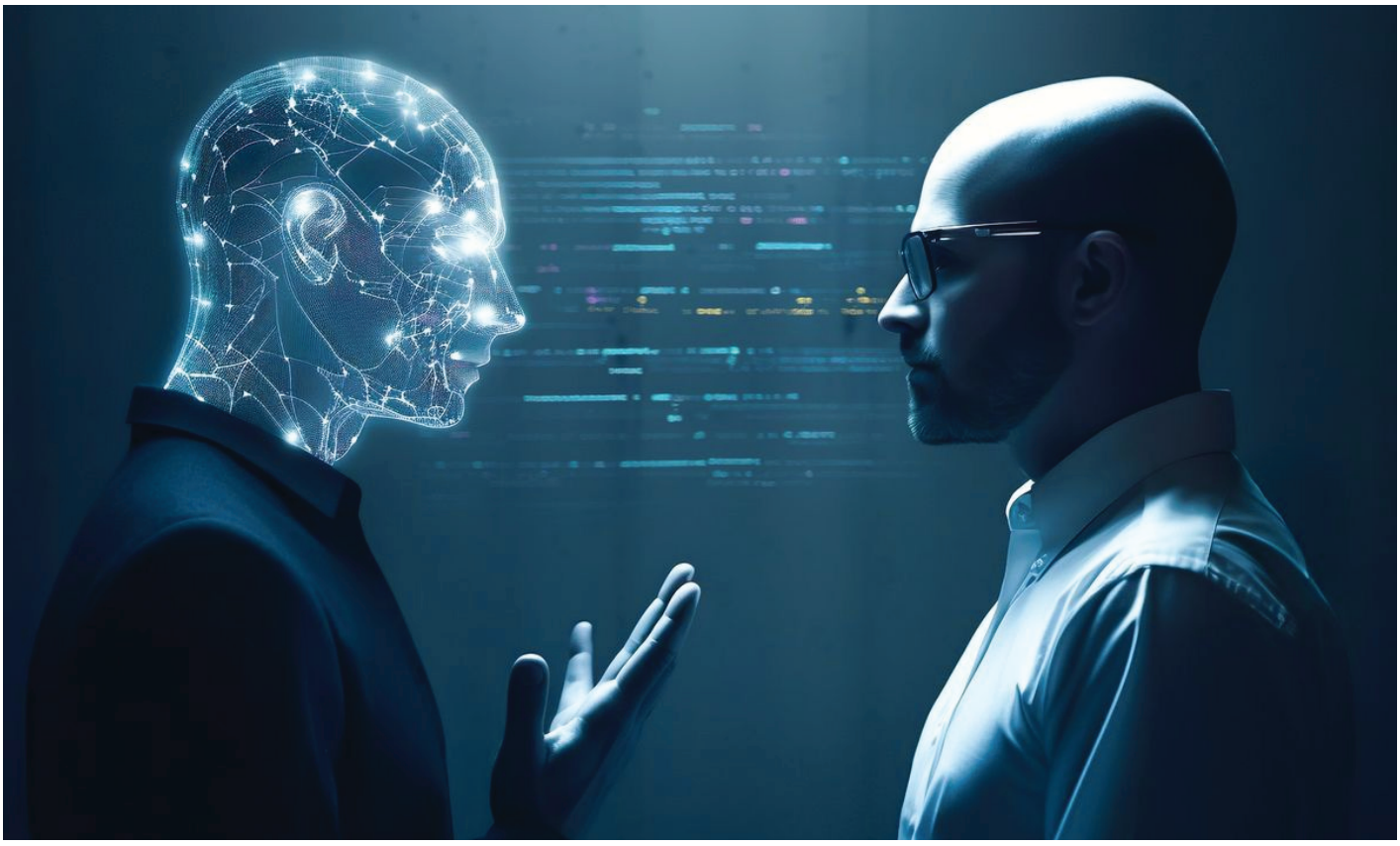




Our Job Placement Cell proudly presents Alumni who have secured positions in Leading Industries and Launched their own Businesses. Their determination and skills reflect the effectiveness of our programs and highlight the bright future awaiting our Graduates. These success stories are true landmarks of achievement.

SCOPE OF THIS COURSE

Agentic AI is shaping the future by enabling systems to work autonomously, reducing human effort while increasing efficiency. It will transform industries with personalized solutions in education, healthcare, and business, offering smarter user experiences. By analyzing large datasets, Agentic AI supports faster and more accurate decision-making for organizations.
The demand for professionals skilled in this technology will continue to rise, unlocking global career opportunities. Overall, Agentic AI will drive innovation, lower costs, and create new business models that benefit individuals and companies alike.



COURSE OUTLINE

Module 01

Environment Setup & Tools

01- Installation of Anaconda and VS Code Editor

02- Creating Virtual Environments (Conda, UV Package Manager)

03- Getting Started with VS Code

04- GitHub & Project Structure Basics

Module 02

Advance Python with Data Structure & Algorithm

01- Python Basics: Syntax and Semantics

02- Variables & Basic Datatypes

03- Operators in Python

04- Conditional Statements (if, elif, else)

05- Loops in Python (for, while)

Module 03

Data Structures in Python

01- Lists & List Comprehension

02- Practical Examples with Lists

03- Sets in Python

04- Dictionaries in Python

05- Tuples in Python

COURSE OUTLINE

Module 04

Functions & Functional Programming

01- Getting Started with Functions

02- More Coding Examples with Functions

03- Python Lambda Functions

04- Map & Filter Functions

05 Function Copy, Closures & Decorators

Module 05

Modules, Files & Error Handling

01- Import Modules & Packages in Python

02- Standard Library Overview

03- File Operations in Python

04- Working with File Paths

05- Exception Handling & Custom Exceptions

Module 06

Object-Oriented Programming (OOP)

01- Object-Oriented Programming (OOP)

02- Inheritance in OOPs

03- Inheritance in OOPs

04- Encapsulation in OOPs

05- Abstraction in OOPs

06- Magic Methods & Operator Overloading

COURSE OUTLINE

Module 07

Iterators, Generators & Advanced Concepts

01- Iterators in Python

02- Generators in Python

03- Advanced Decorators

04- Logging in Python (Single, Multiple Loggers, Real World Examples)

Module 08

Data Science Essentials with Python

01- NumPy in Python

02- Pandas: DataFrame & Series

03- Data Manipulation with Pandas & NumPy

04- Reading Data from Various Sources (CSV, Excel, JSON, DB)

Module 09

Data Validation & Pydantic

01- Introduction to Pydantic

02- Pydantic Practical Implementation

COURSE OUTLINE

Module 10

Introduction to LangChain (GenAI Foundations)

01- LangChain Basics & Virtual Environment Setup

02- Important Components of LangChain

03- Data Ingestion with Document Loaders

04- Recursive Character Text Splitter

05- JSON / HTML Text Splitters

06- Introduction to Embeddings (OpenAI, Ollama, HuggingFace)

07- Vector Stores: FAISS, Chroma DB

08- Building GenAI Apps

09- Retrievers & Chains

10- Introduction to Ollama + Groq API Setup

11- Tracking GenAI Apps with LangSmith

12- Deploying with LangServe

Module 11

Chatbots with LangChain

01- Building Chatbot with Message History

02- Prompt Templates & Conversation Management

03- Working with VectorStore & Retriever

COURSE OUTLINE

Module 12

Agentic AI Foundations

01- AI Agent vs Agentic AI Concepts

02- Introduction to LangGraph

03- LangGraph Environment Setup (OpenAI, Groq, LangSmith keys)

04- Building Graphs (Nodes, Edges, State Graphs)

05- Developing LLM-powered Chatbots with LangGraph

06- State Schema with Dataclasses & Pydantic

07- Routers in LangGraph

08- Tools & ToolNodes with Chain Integration

Module 13

Advanced Agent Architectures

01- Multiple Tools Integration

02- Introduction to Agents & ReAct Agent Architecture

03- Agent with Memory in LangGraph

04- Streaming & Event Handling (astream events)

05- LangGraph Studio Hands-On

06- Prompt Chaining & Parallelization

07- Orchestrator-Worker Model

08- Evaluator-Optimizer Pattern

COURSE OUTLINE

Module 14

RAG (Retrieval Augmented Generation) Variants

01- Agentic RAG (Theory & Implementation)

02- Corrective RAG (Theory & Practice)

03- Adaptive RAG (Theory & Implementation)

Module 15

Capstone Project – Agentic AI Application

01- Project Setup with VS Code & GitHub

02- Designing Frontend with Streamlit

03- Implementing LLM Module & Graph Builder

04- Node Implementation & Integration

05- Connecting Pipeline with Frontend

06- Testing End-to-End Agentic AI Application

COURSE OUTLINE

Module 16

Multi-Agent & Ecosystem Tools

01- Introduction to Model Context Protocol (MCP)
02- Important Components of MCP & Communication Flow
03- Demo of MCP with Claude Desktop
04- Building MCP Servers with Tools & Clients (LangChain)
05- Getting Started with Smithery AI
06- CrewAI, AutoGen, N8N
07- DialogFlow CX for Multi-Agent
08- FreeLancing MASTER CLASS

ABOUT INSTRUCTOR

At NEXSKILL, our instructors are industry experts with over 5 years of experience in their respective fields. They are internationally certified and have successfully mentored over 20,000 students, contributing to numerous success stories.

Our trainers bring a wealth of practical knowledge and real-world insights, Ensuring that you receive high-quality training that aligns with global standards. Their expertise and commitment to student development make them invaluable mentors, dedicated to helping you achieve your professional goals.

