FULL STACK ACADEMY

Gachibowli Branch, Hyderabad

Turn Your Passion for AI into a Power Career!

Become An AI ARTIFICIAL INTELLIGENCE SPECIALIST

45 Days Intensive Offline Classroom Program

45 DAYS
Intensive OFFLINE Training (4 hours Daily)

03 MONTHS
Internship with Projects (30 Projects in GitHub)

ML, DL, NLP, LLM's, GenAI & Agentic Ai

Industry Certification & Internship

100% Placement Readiness

Online Batch Available

Any Graduate with Maths stream can join

NEW BATCH

15 DECEMBER 2025

VENUE
Full Stack Academy, Gachibowli Branch, Hyderabad.

TIMINGS
01:00 TO 05:00 PM IST

REGISTER

JOIN FREE LIVE DEMO
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9015 236 236

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Things To Know About AI Engineering

Who can become a AI Engineer ?

Anyone passionate about solving real-world problems using technology, mathematics, and data can become an AI Engineer. A curious mind and the ability to think logically are key.

Why AI Engineers matter?

With automation, personalization, and intelligence driving innovation, AI Engineers play a vital role in building systems that can learn, reason, and adapt transforming industries and improving human lives.

What is the AI Engineering Lifecycle?

A continuous process that involves data collection, model development, training, deployment, and performance monitoring, ensuring intelligent systems evolve and improve over time.

The Career Prospects for AI Engineers AI Engineers

With the surge in AI adoption across industries, AI Engineering has become one of the most in-demand and rewarding career paths of the decade, offering roles in machine learning, computer vision, NLP, and beyond.

How AI is driving the next big Revolution?

AI is redefining how the world operates — from automating repetitive tasks to enabling machines to think and create. It's the engine behind smarter decisions, innovative products, and the next leap in human progress.

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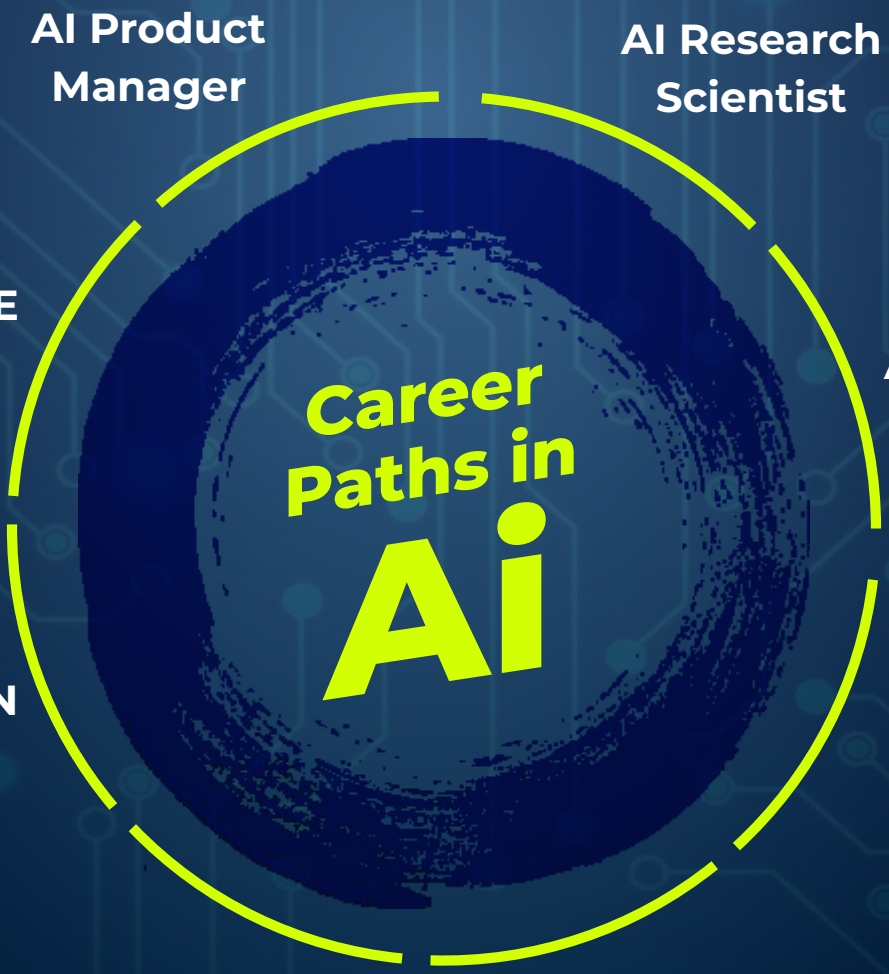

AI Product Manager

AI Research Scientist

AI SOFTWARE DEVELOPER

Generative AI Engineer

AI AUTOMATION ENGINEER

Machine Learning Engineer

NLP Engineer

Computer Vision Engineer

Why Learn

AI ARTIFICIAL INTELLIGENCE SPECIALIST

Embark on a Future-Ready Career

AI is at the heart of the next technological revolution.
Average salaries for entry-level AI roles range between ₹05–10 LPA, with exponential growth potential as experience increases.
The AI industry is expanding nearly 5–6x faster than traditional IT sectors, driven by automation, robotics, and generative AI adoption.

AI Roles in High Demand

Globally, the demand for AI professionals is projected to increase by over 250% by 2026.
In India alone, there will be more than 1 million AI-related job openings in areas like machine learning, computer vision, NLP, and robotics over the next few years.
From startups to global tech giants — everyone is investing heavily in AI talent.

A Graduation Degree is No Longer Enough

Industry leaders now expect candidates to have specialized AI skills and project-based experience.
Traditional degree programs often lag behind industry trends, so learning hands-on AI tools, frameworks, and real-world applications is essential.
To stand out from the crowd, students must combine their degree with practical expertise in AI, data, and model deployment.

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PROGRAM STRUCTURE

Phase 1

Python for Ai
Build a solid foundation in Python programming and data manipulation

Phase 2

Machine Learning & Deep Learning
Master supervised, unsupervised learning algorithms and modern neural networks

Phase 3

GenAi , RAG's , Agentic Ai & MCP
Master Generative AI, RAG , Agentic AI systems, and MCP to build intelligent, autonomous, and production-ready AI applications.

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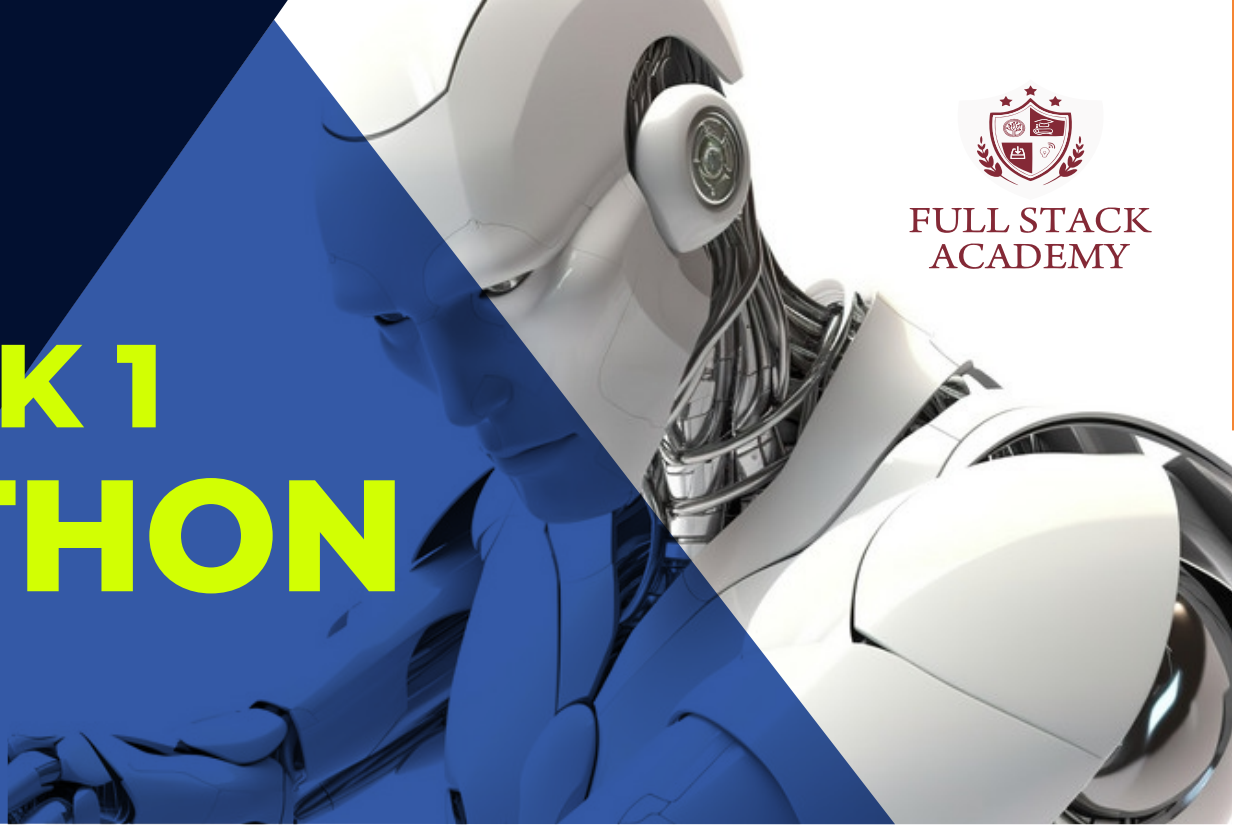
Tools Covered



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WEEK 1
PYTHON

Day 01

Python: Introduction, Variables, Data Types, Operators, Input/Output, Initial Program Development

Day 02

Control Structures: Conditional statements (if-else, nested conditions), Iterative loops (for, while), Control flow keywords (break, continue, pass)

Day 03

Functions: Definition, Parameters and arguments, Return values, Lambda functions, Variable scope

Day 04

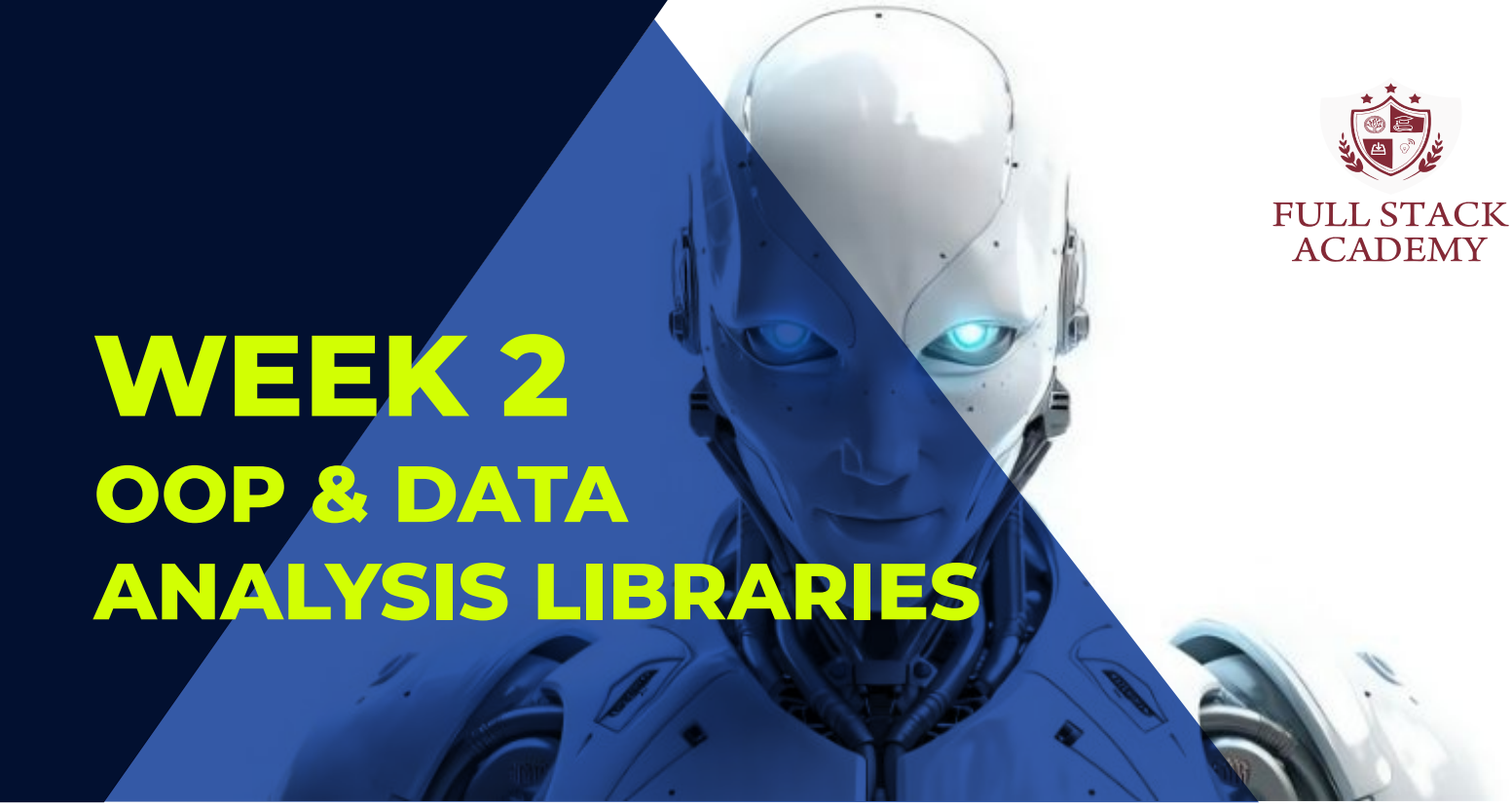
Strings: Definition, Indexing and Slicing, String methods, Formatting techniques

Day 05

Data Structures: List creation, List methods, List comprehensions, Nested lists, Tuples, Sets, and Dictionaries

Day 06

Project: Logic Building and a Mini Python Project Implementation



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WEEK 2
OOP & DATA ANALYSIS LIBRARIES

Day 07

OOP's : Classes and objects, Constructors (__init__), Instance and class variables, The self keyword

Day 08

NumPy: Introduction to NumPy, Array creation, Indexing and slicing, Array operations, Advanced NumPy features

Day 09

Pandas Introduction: Series and DataFrames, Data reading, Data inspection, Indexing with loc and iloc, Data filtering, Handling missing values (dropna,

Day 10

Data Transformation: GroupBy operations, Aggregation functions, Merging and joining DataFrames, Concatenation, Pivot tables

Day 11

Data Visualization: Matplotlib fundamentals, Plot customization, Subplots, Figure saving

Day 12

Project : Data Cleaning and Analysis Case Studies utilizing Pandas
Career Session: Resume Writing & ATS Optimization

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WEEK 3
STATISTICS & MACHINE LEARNING

Day 13

Visualization with Seaborn: Seaborn library overview, Relational plots, Heatmaps, Pairplots, FacetGrid

Day 14

Introduction to Statistics: Why Statistics? Types of Statistics? Data Collection? Population Sample

Day 15

Descriptive Statistics: Measures of central tendencies, dispersion, and variability. Includes variables like frequency distribution, histograms, and statistical

Day 16

Inferential Statistics 1: Probability, Bayes' Theorem, Logarithms, Pearson's Correlation

Day 17

ML Intro: What is Machine Learning, its types,basic ML workflow, and key applications.

Data Preprocessing: Using Scikit-learn for scaling encoding categories, and

Day 18

Project: Development of Plotly Dashboards and Pyreport

Career Session: LinkedIn Profile Creation & Management

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WEEK 4
ADVANCED MACHINE LEARNING

Day 19

Linear Regression: Simple and multiple linear regression, Model training, Prediction generation, Evaluation metrics (MSE, RMSE, R^2, MAE)

Day 20

Logistic Regression: Binary classification, Sigmoid function, Model training, Classification metrics (Accuracy, Precision, Recall, F1-score), Confusion matrix

Day 21

Classification: Naive Bayes Classifier and K-Nearest Neighbors (KNN) implementation

Day 22

Advanced Concepts: Overfitting and Underfitting analysis, Bias-variance tradeoff, Regularization techniques (L1/Lasso, L2/Ridge)

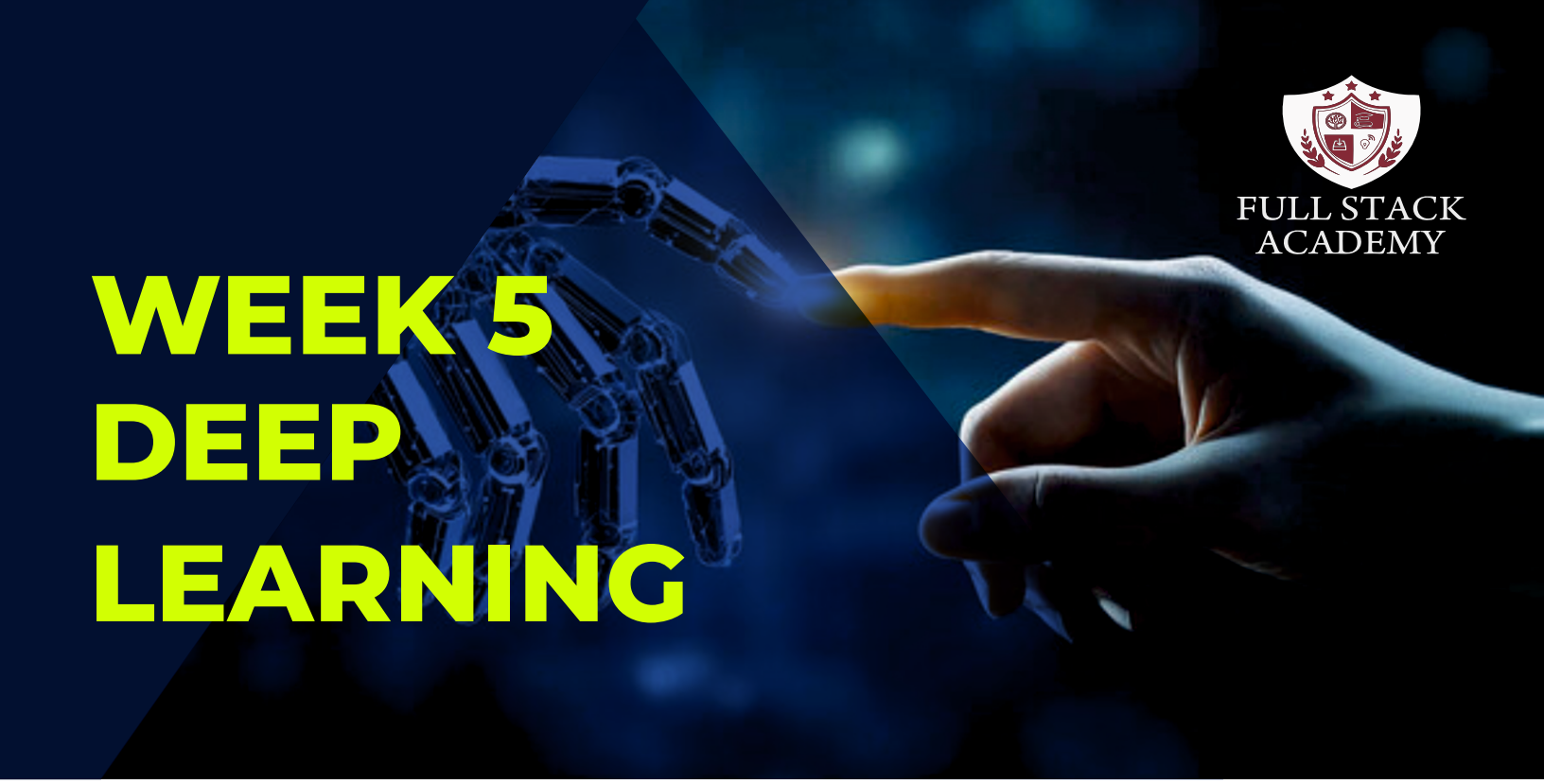
Day 23

Tree-Based Models: Decision Trees for both classification and regression tasks

Day 24

Project: Machine Learning Project with Graphical User Interfaces (GUI) using Streamlit

Career Session: Communication & Soft



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WEEK 5 DEEP LEARNING

Day 25

Ensemble Learning Methodologies: Bagging,Boosting,Feature Importance,Cross Validation,

Day 26

Clustering: K-Means clustering algorithm

Day 27

Model Optimization: Cross-validation (K-Fold), Hyperparameter tuning with GridSearchCV and RandomizedSearchCV,

Day 28

Deep Learning: Perceptron model, Multi-layer neural networks, Activation functions (ReLU, Sigmoid, Tanh), Backpropagation principles

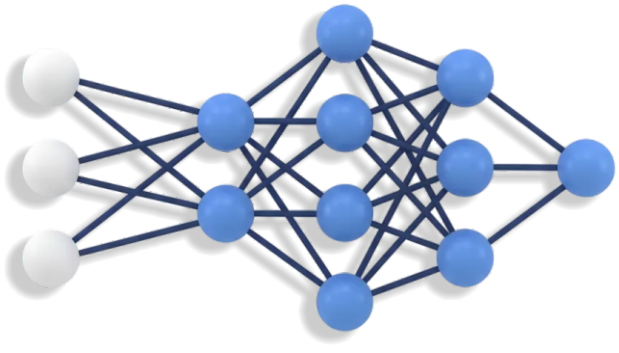
Day 29

Convolutional Neural Networks (CNN): Conv2D layers, Pooling layers, Image

Day 30

Project: Advanced Machine Learning Project

Career Session: Technical Interview Preparation



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WEEK 6

GENERATIVE AI & NLP

Day 31

Recurrent Neural Networks (RNN) & LSTM: Introduction to RNNs, Long Short-Term Memory (LSTM), Handling sequence data

Day 32

NLP: Natural Language Processing Lexical Processing

Day 33

NLP: Natural Language Processing Syntactic And Semantical Processing

Day 34

Generative AI & LLM Fundamentals: How LLMs work, GPT architecture, tokenization, embeddings

Day 35

Prompt engineering: Zero-shot, few-shot, chain-of-thought, temperature, top-p

Day 36

Project : Generative Ai

Career Session: Interview Techniques & Strategies

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WEEK 7
AGENTIC Ai, RAG & MCP

Day 37
Vector DataBase: Embeddings, semantic search, Pinecone, ChromaDB, FAISS

Day 38
RAG Systems: Retrieval Augmented Generation, document chunking, retrieval strategies

Day 39
LangChain Basics : Chains, prompts, output parsers, memory, LangChain components

Day 40
AI Agents Architecture: Agent design patterns (ReAct, Plan-and-Execute), tool use, function calling

Day 41
Advanced Agent Patterns: Agent memory, state management, error

Day 42
Project: Agentic Ai
Career Sessions: Mock Interviews with Feedback

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WEEK 8
AGENTIC Ai, RAG & MCP

Day 43
Agent Frameworks - Part 1: Testing strategies, debugging agents, cost optimization, monitoring

Day 44
Agent Frameworks - Part 2: AutoGen or CrewAI, multi-agent systems, agent collaboration

Day 45
Agent Testing & Optimization: Testing strategies, debugging agents, cost optimization, monitoring

Day 46
MCP Core: Model Context Protocol,MCP Server & Client, Tools, Resources, Context Management

Day 47
Hot Integrations: Tool Calling, Schema (Input/Output), Context Grounding, RAG Workflows, Reasoning Models

Day 48
Building & Agents: Python MCP Server, AI Agents, Autonomous Workflows, Guardrails & Safety, Deployment

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PROJECTS COVERED

PYTHON
1.Student Grade Calculator in Python
2.Billing System using Functions
3.Contact Book Application using OOP
4.Library Management System with Classes & Objects
5.ATM Simulation using OOP Concepts

EDA
6.Retail Sales Exploratory Data Analysis
7.Movie Ratings Data Analysis
8.Stock Market Trend Analysis
9.Air Quality Time-Series Analysis
10.Customer Churn Insights Report

Machine Learning (Supervised & Unsupervised)
11.House Price Prediction with Regression
12.Student Score Prediction Model
13.Loan Approval Classification Model
14.Iris Flower Classification
15.Customer Segmentation using K-Means
16.Market Basket Clustering
17.Spam Email Detection Model

Deep Learning (CNN, RNN, LSTM) – 6 Projects
18.Handwritten Digit Recognition (MNIST CNN)
19.Cats vs Dogs Image Classifier
20.Sentiment Analysis using RNN
21.Stock Price Forecasting using LSTM
22.Next-Word Prediction using LSTM
23.Fake News Detection using Deep Learning

Generative AI, LLM, RAG
24.Text Summarization using Pretrained LLM
25.Question-Answer System using RAG
26.PDF Document Chat System
27.Prompt-Based Content Generation Tool

MCP (Model Context Protocol)
30.MCP Server with Utility Tool
31.MCP File Reader Tool
32.MCP Agent Workflow Integration

Agentic AI (Open Source)
28.Web Search Automation Agent
29.File Operations Agent
27.Prompt-Based Content Generation Tool

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CAREER DEVELOPMENT SESSIONS COVERED

- Resume Writing & ATS Optimization
- LinkedIn Profile Creation & Management
- Communication & Soft Skills
- Technical Interview Preparation
- Interview Techniques & Strategies
- Mock Interviews with Feedback
- Portfolio Development

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LEARNING OUTCOMES

Upon successful completion of this 45-day program, participants will possess the ability to:

- Develop efficient Python code adhering to Object-Oriented Programming (OOP) principles.
- Conduct comprehensive data analysis utilizing the Pandas and NumPy libraries.
- Generate insightful visualizations and interactive dashboards.
- Construct and deploy effective machine learning models.
- Engage with Large Language Models (LLMs) and their respective APIs.
- Design and implement sophisticated AI agents, potentially leveraging frameworks like LangChain.
- Develop Natural Language Processing (NLP) systems and AI agent applications.
- Implement deep learning solutions for various problem sets.
- Achieve readiness for technical interviews and job placement opportunities.

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CHALLENGES & GRADING

Participants may accrue up to 10,000 points throughout the program. Minimum threshold of 6,000 points (60%) is required to successfully pass the program.

The final grade is determined by the total accumulated points:

PLATINUM

9,000+

Premium certificate, Momento, and a gadget

GOLD

8,000–8,999

Premium certificate and a Momento

SILVER

7,000–7,999

Premium certificate

BRONZE

6,000–6,999

Standard Certificate

POINT ACCUMULATION STRUCTURE (Daily)

ATTENDANCE

500

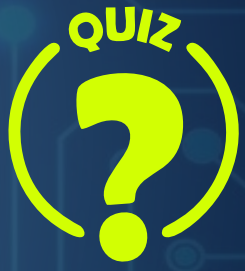
Full attendance for the 4-hour daily session

DAILY CHALLENGE

100

Completion of 20–30 quiz questions based on the day's topic

DAILY CHALLENGE



50-100

Live 10-question speed quiz (Higher points awarded for top ranks)

Total daily points available: 650–700 points
Total points possible over 45 days: Approximately 10,000+

THREE GUIDING PRINCIPLES FOR SUCCESS

1. **Maintain Regular Attendance:** An attendance rate of 80% guarantees the program certificate.

2. **Complete the Daily Challenge:** This serves as the primary learning reinforcement and provides an assured 100 points.

3. **Participate in the Quiz:** This is a dynamic and efficient method to enhance performance and boost the overall score.

Problems Ai Engineers Solve in Various Industries

Healthcare

01

Clinical Decision Support (CDS) - AI-assisted diagnosis
Personalized Medicine - ML-driven treatments
EHR Analysis - AI-powered automation
Telemedicine - Intelligent virtual diagnostics
Population Health - Predictive analytics

Finance:

02

Campaign Optimization - AI-powered targeting
Content Generation - Generative AI
Social Media Analytics - NLP sentiment tracking
Sales Forecasting - Neural network predictions
Chatbots - Conversational marketing AI

Retail:

03

Fraud Detection - Real-time anomaly detection
Algorithmic Trading - Deep learning systems
Risk Management - AI-based assessment
Credit Scoring - ML-powered evaluation
Robo-advisors - Automated investment platforms

Manufacturing

04

Personalized Learning - Adaptive AI tutoring
Intelligent Tutoring Systems - 24/7 AI support
Student Success Prediction - Early warning systems
Automated Grading - NLP-based assessment
Learning Analytics - Performance tracking

Marketing:

05

Fraud Detection - Real-time anomaly detection
Algorithmic Trading - Deep learning systems
Risk Management - AI-based assessment
Credit Scoring - ML-powered evaluation
Robo-advisors - Automated investment platforms

Education:

06

Predictive Maintenance - IoT + ML failure prediction
Quality Control - Computer vision inspection
Digital Twin - AI simulation models
Robotics & Automation - Intelligent systems
Supply Chain - AI optimization

Energy:

07

Recommendation Systems - Personalized suggestions
Dynamic Pricing - Real-time AI adjustment
Customer Churn - ML retention models
Inventory Management - AI-driven optimization
Sentiment Analysis - NLP customer insights

Government:

08

Smart Grid - Intelligent distribution
Predictive Maintenance - Equipment failure prediction
Renewable Energy - AI grid management
Energy Forecasting - Neural network models
Demand Response - Load prediction systems

KNOW THE TEAM

FACILITATORS

SHUBHAM LAL
Developer

Microsoft

EJAZ AHMED QAZI
AI Educator

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SHAHAR BANU
DevOps Specialist

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FOUNDERS

MOHD ABUBAKR
Co-Founder

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AIJAZ AHMED
Co-Founder - Managing Director

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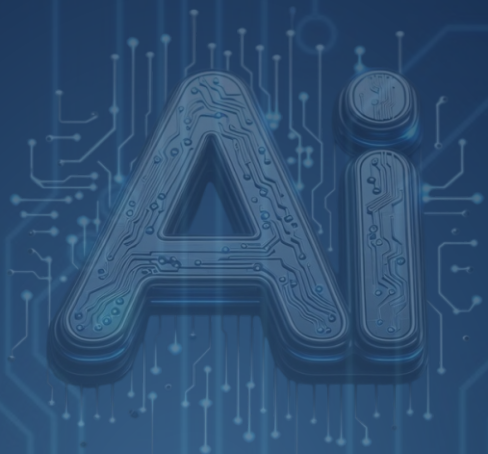

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