



Zestminds Academy

AI & LLM Training Syllabus

45 Days | 3 Months | 6 Months AI & LLM Pro Track

Zestminds Academy, Mohali

Training Mode	Offline classroom training in Mohali
Program Options	45 Days AI & LLM Foundation, 3 Months AI & LLM Program, 6 Months AI & LLM Pro Track
Batch Timings	10:00 AM - 1:00 PM / 2:00 PM - 5:00 PM
Fees	INR 7,000 for 45 Days / INR 4,000 per month for 3 and 6 Months
Suitable For	B.Tech, BCA, MCA, M.Tech students, beginners, freshers, Python learners and students exploring AI, ML, Generative AI and LLM applications
Contact	+91-9056277961 Zestminds Academy, Mohali

This syllabus is designed to help students understand what they will learn in each AI and LLM training track before joining. Exact module depth, assignments, tools and project scope may vary by batch, student readiness and selected duration.

The focus is practical AI learning, prompt practice, AI API workflows, chatbot-style assignments, RAG/document Q&A exposure, GitHub documentation and interview preparation support.

OVERVIEW

AI & LLM Training Overview

The AI & LLM Training program at Zestminds Academy is built for students who want practical exposure to Artificial Intelligence, Machine Learning, Generative AI, prompt engineering, Large Language Models, AI APIs, chatbot workflows, RAG basics and project-style AI assignments.

Program Options

45 Days AI & LLM Foundation Short-duration practical training for students who want AI, GenAI, prompt engineering, LLM, AI API, chatbot workflow and RAG exposure.	3 Months AI & LLM Program Structured AI learning for beginners and freshers with Python for AI, data handling, ML basics, NLP basics, LLM introduction and mini project exposure.
6 Months AI & LLM Pro Track First 3 months for AI learning, ML foundation and LLM workflows. Next 3 months for major AI project development with GitHub documentation.	Offline Classroom Mode Students learn in Mohali with mentor support, doubt discussion, assignments, workflow explanation and practical project-style learning.

Students Will Learn

- AI, Machine Learning, Generative AI and LLM fundamentals
- Prompt engineering, structured prompting and output improvement
- Python for AI, data handling and basic automation workflows
- Machine learning basics, datasets, features, training and prediction
- NLP basics and text-based AI workflows
- AI API request-response flow and chatbot-style application planning
- RAG basics, embeddings, vector search and document Q&A exposure
- LLM application thinking, response handling and project workflow
- Major AI project planning and GitHub documentation in the 6-month track

45 Days AI & LLM Foundation

Short-duration AI and LLM training for students who want practical exposure to AI concepts, Generative AI, prompts, LLM usage, AI APIs, chatbot workflow and beginner-level RAG concepts.

Duration: 45 Days | Fee: INR 7,000 | Mode: Offline Classroom

Module 1: AI, ML, GenAI and LLM Basics

- What is Artificial Intelligence
- Difference between AI, Machine Learning, Generative AI and LLMs
- Common AI use cases in business, education and software
- How AI models take input and generate output
- AI limitations, hallucinations and responsible usage basics

Module 2: Prompt Engineering Practice

- Role-based prompts
- Structured prompts
- Prompt testing and refinement
- Improving weak AI outputs
- Output formats such as bullet points, tables and JSON-style responses

Module 3: AI Tools and LLM Workflows

- Using AI tools for practical tasks
- Understanding context and instructions
- Prompt templates for repeatable work
- Response checking and quality improvement
- Simple AI workflow planning

Module 4: AI APIs and Chatbot Workflow

- What is an AI API
- Request-response flow
- JSON response basics
- Planning chatbot-style user flow
- Handling user input and AI output

Module 5: RAG and Document Q&A Introduction

- What is Retrieval-Augmented Generation
- Knowledge base concept
- Embeddings and vector search introduction
- Document-based question answering flow
- Beginner-level RAG workflow exposure

Module 6: Guided Assignment Review

- Prompt workflow assignment review
- AI output quality checking
- Simple chatbot flow planning
- Document Q&A workflow discussion
- Mentor feedback and improvement

45 Days Practical Assignments

- Prompt workflow assignment
- Structured output generation task
- AI output quality checking exercise
- Chatbot conversation flow planning
- AI API response handling practice
- Document Q&A / RAG mini exposure task

3 Months AI & LLM Program

Structured AI program for beginners and freshers who want Python for AI, data handling, Machine Learning basics, NLP basics, LLM introduction, AI API workflow and mini project exposure.

Duration: 3 Months | Fee: INR 4,000/month | Mode: Offline Classroom

Module 1: Python for AI Foundation

- Python basics revision
- Variables, functions, lists, dictionaries and files
- JSON basics
- Working with data inputs
- Basic automation workflow thinking

Module 2: Data Handling for AI

- Dataset understanding
- Rows, columns and features
- CSV / Excel file reading basics
- Pandas DataFrame introduction
- Cleaning and preparing simple data

Module 3: Machine Learning Basics

- What is machine learning
- Features, labels and target values
- Training and prediction concept
- Basic classification and regression idea
- Model evaluation introduction

Module 4: NLP Basics

- Text data basics
- Text cleaning concept
- Tokenization introduction
- Simple text classification idea
- NLP use cases with AI tools and LLMs

Module 5: Prompt Engineering and LLM Applications

- Prompt patterns for better outputs
- System and user instruction thinking
- Structured response generation
- Prompt testing and prompt improvement
- LLM-based application use cases

Module 6: AI APIs and Chatbot App Flow

- AI API request-response workflow
- API keys and environment concept
- Sending user input to an AI model
- Handling AI responses
- Common API and output errors

Module 7: RAG and Document Q&A Basics

- Document splitting and chunking concept
- Embeddings introduction
- Vector search basics
- Retrieval + response workflow
- Document Q&A project planning

Module 8: Mini AI Project with GitHub

- Mini project idea selection
- Feature planning
- Notebook or folder structure
- README basics
- GitHub upload and project explanation

3 Months Practical Assignments

- ML mini task using a beginner dataset
- Prompt engineering workflow assignment
- AI API request-response assignment
- Chatbot mini flow assignment
- Document Q&A / RAG demo assignment
- Mini AI project with GitHub upload

6 Months AI & LLM Pro Track

First 3 months for AI learning, ML foundation and LLM workflows. Next 3 months for major AI project development with GitHub documentation.

Duration: 6 Months | Fee: INR 4,000/month | Mode: Offline Classroom | Includes project-focused AI training

6-Month Track Structure

First 3 Months	AI learning, Python for AI, data handling, ML basics, NLP basics, prompts, AI APIs, RAG basics, deep learning and deployment introduction.
Next 3 Months	Major AI project development with GitHub documentation, README writing, testing, improvement, project explanation and interview preparation.

First 3 Months: AI Learning and ML/LLM Foundation

- Python for AI revision
- Data handling with files, CSV and Pandas basics
- Machine Learning basics and model workflow
- NLP basics and text data handling
- Prompt engineering and LLM workflow practice
- AI API integration basics
- Chatbot application flow
- RAG and document Q&A basics
- Deep Learning introduction
- Computer Vision basics
- Deployment and project presentation basics

First 3 Months Practical Assignments

1. Prompt Workflow & Evaluation Students create structured prompts, test outputs, improve weak responses and document the final prompt workflow.	2. Machine Learning Mini Project Students work with a beginner dataset to understand features, training, prediction and basic result explanation.
3. AI API / Chatbot Assignment Students practice user input, AI request-response flow, JSON response handling and chatbot-style workflow planning.	4. RAG / Document Q&A Assignment Students explore document-based question answering through chunking, retrieval thinking and response generation flow.

Next 3 Months: Major AI Project with GitHub Documentation

The last 3 months of the 6-month AI & LLM training are focused on a guided major project. Students apply AI concepts, Python, data handling, ML/LLM workflows, API integration, debugging and project structure in a more complete project workflow.

Major Project Work Includes

- Project idea discussion
- Problem statement and requirement understanding
- Dataset or document source selection
- Feature planning and workflow design
- Prompt strategy or model workflow planning
- Data preprocessing or document preparation
- AI API, ML model or LLM workflow integration
- RAG pipeline, if suitable for the project
- Backend or app flow planning
- Error handling and response validation
- Testing and debugging
- GitHub repository organization
- README documentation
- Project demo preparation
- Project explanation and interview discussion practice

Expected Major Project Outcomes

Working AI Project Structure Students learn how to organize notebooks, scripts, app files, data folders, prompts, API flow or RAG components based on the selected project.	GitHub Repository Students upload and maintain project files in GitHub with proper folder structure and basic version history.
README Documentation Students prepare a README that explains project purpose, features, setup steps, tools used, workflow and project limitations.	Project Explanation Students practice explaining the project for college review, interviews and portfolio discussions.

Major Project and Portfolio Options

Students may work on a project based on selected batch, tool availability, dataset/document availability and student readiness. The goal is to build one complete portfolio-ready AI project, not only disconnected tool practice.

AI Chatbot / Assistant	Build a chatbot-style workflow using prompts, AI API flow, response handling and conversation planning.
Document Q&A / RAG Project	Create a document-based question-answering workflow using document preparation, retrieval thinking and response generation.
Machine Learning Prediction Project	Use a dataset to understand data preparation, model training, prediction and result explanation.
NLP Text Analysis Project	Analyze text data for sentiment, classification or simple text insight workflows.
AI API Workflow Application	Create a small application workflow where user input is processed through AI API and response is handled clearly.

Major Project Deliverables

- Project folder structure
- Dataset or document folder if applicable
- Prompt or model workflow notes
- AI API / model workflow code
- Testing notes and improvement log
- GitHub README and documentation
- Project demo or presentation file

Tools Students May Use

Programming	Python, VS Code, command line / terminal, Jupyter Notebook or Google Colab where suitable
Data & ML	Pandas, NumPy, scikit-learn basics and beginner dataset handling
AI / LLM	AI tools, LLM APIs, prompt templates, response handling and structured output workflows
RAG Basics	Document preparation, embeddings concept, vector search concept and document Q&A workflow
Testing & Docs	Postman or API testing tool, Git, GitHub, README files, project folders and presentations

Practical Learning Focus

Students are trained to understand AI workflows practically: write prompts, test outputs, handle data, use APIs, organize projects, document work and explain AI projects clearly.

Students Will Practice

- Writing and testing prompts
- Checking AI output quality
- Working with beginner datasets
- Understanding ML workflow
- Handling AI API responses
- Planning chatbot-style workflows
- Exploring document Q&A and RAG basics
- Creating mini AI assignments
- Using GitHub for project documentation
- Explaining AI projects for interviews or academic review

Certificate, Internship and Career Direction

Certificate Support	Training completion certificate support may be available as per selected program, attendance, assignments and completion criteria.
Project-Focused Training	The 6 Months AI & LLM Pro Track includes deeper project-style learning and major AI project documentation. Students should confirm exact internship/documentation details during counselling.
Documentation	Students should confirm certificate and internship letter details during counselling before admission.

Career Direction After AI & LLM Training

- AI/ML foundation path
- Generative AI application learning path
- Prompt engineering and AI workflow understanding
- Chatbot and AI assistant workflow exposure
- NLP and text-based AI beginner path
- Python for AI and data handling foundation
- RAG / document Q&A project exposure
- Portfolio project preparation for internships or fresher interviews

Important Note

Zestminds Academy does not promise that students will become advanced AI engineers in 45 days. The 45-day track builds foundation exposure, while the 3-month and 6-month tracks provide deeper learning and project preparation. Final progress depends on student practice, skill level, consistency, project quality and interview performance.

Book Counselling	Call or WhatsApp +91-9056277961
Visit	Zestminds Academy, E-45, Industrial Area, Phase 8, Mohali
Best Next Step	Compare 45 Days, 3 Months and 6 Months AI & LLM tracks with a training counsellor before admission.

