CODE BEGUN®
SOFTWARE TRAINING & CAREER SOLUTIONS

An EdTech Company
Only for Serious Careers

Generative AI
145-Day Course

Are You Aiming for 7+ LPA?



Become a

Generative AI Developer

A High-Demand Role in Today's Industry

Build end-to-end applications, work on real-world projects, and get job-ready for top product and GCC companies.

- **End-to-End Development**
- **Real-World Projects**
- **Industry Mentors**
- **Placement Support**

- **145 Days**
- **6** Real-World Projects
- **Small Batch** (Only 27)
- **Placement Preparation from Day 1**

Tools & Technologies

Python · PyTorch · TensorFlow · Jupyter · Pandas · Docker

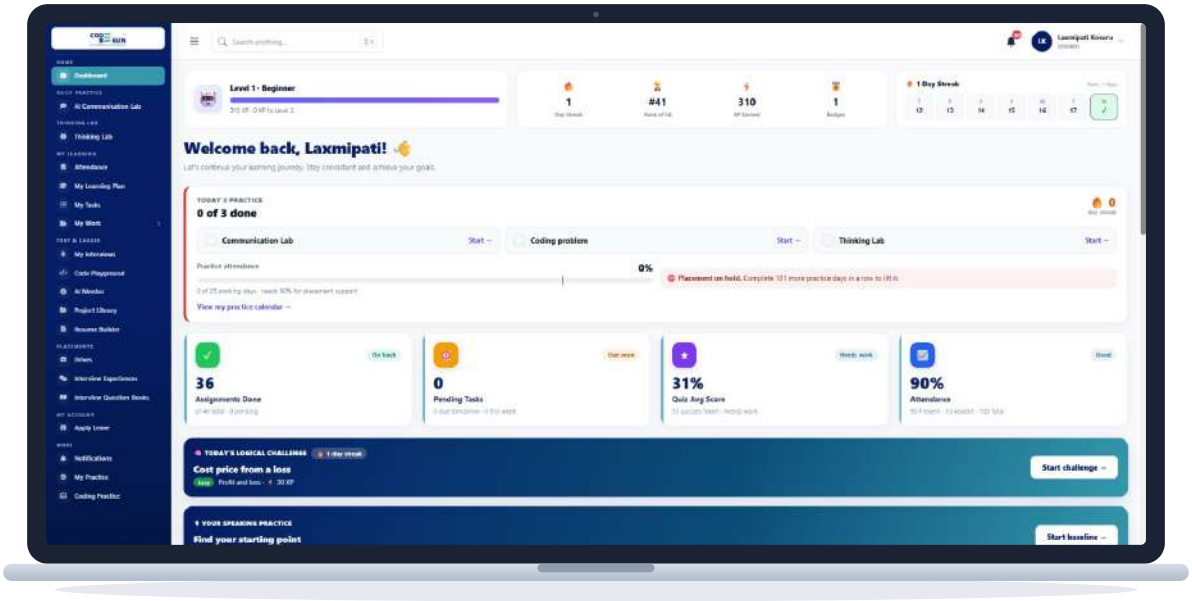
- Build Job-Ready Skills
- Create a Strong Portfolio
- Crack Interviews
- Get Placed in Top Companies

CODEBEGUN LMS PLATFORM

One Platform. Complete Learning Experience.

Access everything you need to learn, practice, improve and prepare for your career — all in one place.

Your Digital Learning Ecosystem



- Learn from Experts
- Practice & Build Skills
- Track Your Progress
- Prepare for Interviews
- Grow with AI Support

Everything in One Place

AI Communication Lab

Improve English speaking, communication skills and confidence through AI-powered practice.

Thinking Lab

Develop logical thinking, analytical abilities and problem-solving skills.

Code Playground

Write, execute and practice programming in an integrated coding environment.

AI Mentor

Get AI-powered learning assistance and technical concept guidance.

Mock Interviews

Practice real interview rounds with expert feedback and build the confidence to crack them.

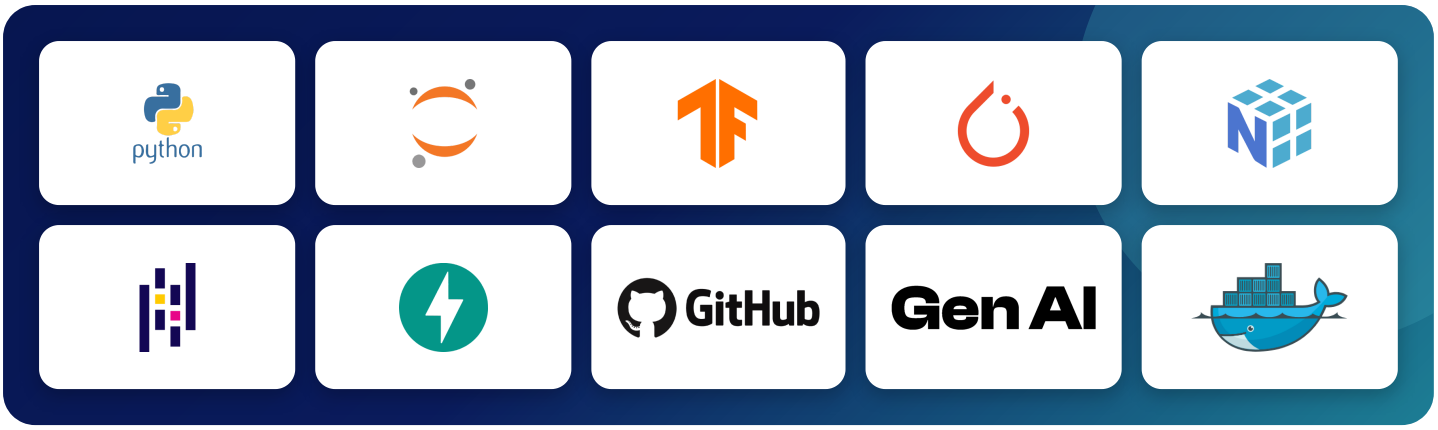
Resume Builder

Create and prepare professional resumes for job applications.

Interview Question Books

Access interview question books covering Python, ML, LLMs, GenAI and more for revision.

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GENERATIVE AI COURSE

145 Days of structured learning, from AI basics to deployment, to make you job ready. Learn, build and innovate with hands-on projects and real-world use cases: machine learning, deep learning, LLMs, prompt engineering, RAG, AI agents and multimodal AI. Finish with a deployed capstone project, a strong portfolio and complete interview preparation.

Course Roadmap

01 AI Foundations
02 Machine Learning Essentials
03 Deep Learning with Neural Networks
04 Generative AI Models & Tools
05 Prompt Engineering & LLM Applications
06 Multimodal & Advanced GenAI
07 GenAI Projects
08 Deployment & MLOps Basics
09 Career Preparation
10 Final Project & Innovation

6 Real-World GenAI Projects

PROJECT 01
AI-Powered Chatbot
Python, LLM API, LangChain

PROJECT 02
Resume Analyzer
Python, NLP, LLM

PROJECT 03
Document Q&A System
RAG, Vector DB, LangChain

PROJECT 04
Code Explainer
Python, LLM, Gradio

PROJECT 05
Image Generator App
Stable Diffusion, Python, Streamlit

PROJECT 06
AI Study Buddy
LLM, Agents, FastAPI

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Module 1: AI Foundations

Days 1 – 15. Start from zero and understand what AI is, how it evolved and where Generative AI fits. You will set up Python, work with data libraries and Jupyter, and get comfortable with the tools used throughout the course.

Introduction to AI

- Day 1: What is AI? Applications
- Day 2: History & Evolution of AI
- Day 3: Types of AI (ML, DL, GenAI)
- Day 4: Generative AI Overview
- Day 5: LLMs and How They Work

Prompts, Ethics & Python for AI

- Day 6: Prompt Engineering Basics
- Day 7: AI Ethics & Responsible AI
- Day 8: Data and AI
- Day 9: Python for AI
- Day 10: Libraries (NumPy, Pandas)

Data Handling & Tools

- Day 11: Data Preprocessing
- Day 12: Data Visualization
- Day 13: Intro to Jupyter Notebook
- Day 14: AI Tools & Platforms
- Day 15: Module Review & Quiz

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Module 2: Machine Learning Essentials

Days 16 – 30. Learn the machine learning workflow and the core algorithms behind modern AI. You will train, evaluate and tune models, and understand how a trained model is prepared for deployment.

ML Workflow & Learning Types

- Day 16: ML Overview & Workflow
- Day 17: Supervised Learning
- Day 18: Unsupervised Learning
- Day 19: Model Evaluation Metrics
- Day 20: Linear Regression

Core ML Algorithms

- Day 21: Logistic Regression
- Day 22: Decision Trees
- Day 23: Random Forest
- Day 24: K-Means Clustering
- Day 25: Feature Engineering

Tuning, Validation & Practice

- Day 26: Hyperparameter Tuning
- Day 27: Cross-Validation
- Day 28: ML Projects (Basics)
- Day 29: Model Deployment Basics
- Day 30: Review & Practice

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Module 3: Deep Learning with Neural Networks

Days 31 – 45. Understand how neural networks learn and build them with TensorFlow and Keras. You will move from perceptrons to CNNs, RNNs and transfer learning for real image and sequence problems.

Neural Network Foundations

- Day 31: Neural Networks Basics
- Day 32: Perceptron & Layers
- Day 33: Activation Functions
- Day 34: Loss Functions
- Day 35: Gradient Descent

Building Deep Networks

- Day 36: Backpropagation
- Day 37: TensorFlow & Keras
- Day 38: Building DNNs
- Day 39: CNNs for Images
- Day 40: RNNs for Sequences

Advanced Architectures

- Day 41: LSTMs & GRUs
- Day 42: Transfer Learning
- Day 43: Model Optimization
- Day 44: DL Projects
- Day 45: Review & Quiz

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Module 4: Generative AI Models & Tools

Days 46 – 60. Enter the world of Generative AI. You will learn how LLMs and Transformers work, use Hugging Face and LangChain, and build retrieval-based applications with vector databases and AI agents.

Generative AI Landscape

- Day 46: Generative AI Landscape
- Day 47: LLMs and Transformers
- Day 48: How ChatGPT Works
- Day 49: Hugging Face Basics
- Day 50: Working with Pretrained Models

Text Generation & LangChain

- Day 51: Text Generation
- Day 52: Summarization & Q&A
- Day 53: Text Embeddings
- Day 54: LangChain Basics
- Day 55: Prompt Chaining

RAG, Multimodal AI & Agents

- Day 56: RAG Concepts
- Day 57: Vector Databases
- Day 58: Multimodal AI (Text, Image)
- Day 59: AI Agents
- Day 60: Review & Hands-on Practice

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Module 5: Prompt Engineering & LLM Applications

Days 61 – 75. Master the art of writing effective prompts and turn LLMs into useful applications. You will practise advanced prompting, function calling and build practical chatbots and business tools.

Prompt Engineering Strategies

- Day 61: Prompt Engineering Strategies
- Day 62: Zero-shot & Few-shot Learning
- Day 63: Chain-of-Thought Prompting
- Day 64: Role-Based Prompting
- Day 65: Prompt Templates

Advanced Prompting & Use Cases

- Day 66: Advanced Prompt Techniques
- Day 67: Function Calling
- Day 68: AI for Content Creation
- Day 69: AI for Code Generation
- Day 70: AI for Data Analysis

LLM Applications

- Day 71: AI for Business
- Day 72: Building Chatbots
- Day 73: Practical LLM Projects
- Day 74: Ethics & Safety in AI
- Day 75: Review & Quiz

MID-COURSE BREAK

INTERVAL

Pause. Recharge. Continue.



You have covered AI foundations, machine learning, deep learning, GenAI models and prompt engineering. Take a short break, then get ready for the next stage.

Your Course Journey

YOU ARE HERE

01	02	03	04	05	06	07	08	09	10
AI Foundations	Machine Learning	Deep Learning	GenAI Models	**Prompt Eng.**	Multimodal	GenAI Projects	Deployment	Career Prep	Final Project

Covered So Far

01 AI Foundations
Days 1 – 15 · AI basics, Python, data tools

02 Machine Learning Essentials
Days 16 – 30 · Algorithms, evaluation, tuning

03 Deep Learning
Days 31 – 45 · Neural networks, CNNs, RNNs

04 Generative AI Models & Tools
Days 46 – 60 · LLMs, LangChain, RAG, agents

05 Prompt Engineering
Days 61 – 75 · Prompting, chatbots, LLM apps

Coming Up Next

06 Multimodal & Advanced GenAI
Days 76 – 90 · Image, audio, video, agents

07 GenAI Projects
Days 91 – 105 · Build real AI applications

08 Deployment & MLOps
Days 106 – 120 · Streamlit, Docker, cloud

09 Career Preparation
Days 121 – 135 · Resume, mock interviews

10 Final Project & Innovation
Days 136 – 145 · Capstone, demo, next steps

Take a breath. The best part of the course is still ahead.

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FUN GAMES & ACTIVITIES

Learn Together. Play Together. Grow Together.

Every week we mix games, team bonding and group challenges into the learning routine, so students build confidence, teamwork and friendships along the way.

> **CodeBegun is not a coaching institute, it is a software environment.**









Learn. Play. Grow.

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WORKSHOPS, INTERVIEWS & TESTS

Practice. Perform. Get Job-Ready.

Hands-on sessions, interview practice and regular assessments keep every student sharp and placement-ready.



01

Technical Workshops

Hands-on technology workshops, practical sessions and demonstrations.

02

Mock Interviews

Practice technical interviews, HR rounds and communication skills.





03

Tests & Assessments

Programming tests, technical quizzes, aptitude assessments and knowledge evaluations.

Learn. Practice. Participate. Succeed.

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Module 6: Multimodal & Advanced GenAI

Days 76 – 90. Go beyond text with image, video, audio and speech generation. You will build multimodal apps, orchestrate agents with AutoGen and CrewAI, and apply GenAI in healthcare, finance and education.

Image, Video & Audio Generation

- Day 76: Image Generation (DALL-E)
- Day 77: Image Editing (Stable Diffusion)
- Day 78: Video Generation (Sora/Runway)
- Day 79: Audio Generation (MusicGen)
- Day 80: Speech-to-Text & TTS

Multimodal Apps & Agents

- Day 81: Multimodal Models
- Day 82: Build a Multimodal App
- Day 83: LLM Chains & Agents
- Day 84: AutoGen & CrewAI
- Day 85: AI for Healthcare

Industry Use Cases & Optimization

- Day 86: AI for Finance
- Day 87: AI for Education
- Day 88: Large Context Handling
- Day 89: Performance Optimization
- Day 90: Module Review

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Module 7: GenAI Projects

Days 91 – 105. Apply everything by building real GenAI applications. Each day you will create, test and polish a project that you can show to recruiters, ending with a portfolio project and its deployment.

Chat, Documents & Code

- Day 91: AI-Powered Chatbot
- Day 92: Resume Analyzer
- Day 93: Document Q&A System
- Day 94: Code Explainer
- Day 95: Content Summarizer

Creative & Assistant Apps

- Day 96: Image Generator App
- Day 97: Sentiment Analyzer
- Day 98: AI Study Buddy
- Day 99: Personal Assistant
- Day 100: Travel Planner

Portfolio Project

- Day 101: Smart Research Tool
- Day 102: Business Idea Generator
- Day 103: Portfolio Project
- Day 104: Project Deployment
- Day 105: Review & Feedback

Module 8: Deployment & MLOps Basics

Days 106 – 120. Take your AI applications live. You will wrap models in Streamlit, Gradio, Flask and FastAPI, deploy with Docker and the cloud, and learn the MLOps habits that keep AI systems reliable.

Serving AI Applications

- Day 106: Model Deployment Overview
- Day 107: Streamlit Basics
- Day 108: Gradio Basics
- Day 109: Flask for AI Apps
- Day 110: FastAPI

Deployment & MLOps

- Day 111: Deploy on Hugging Face Spaces
- Day 112: Docker Basics
- Day 113: CI/CD for AI
- Day 114: MLOps Concepts
- Day 115: Model Monitoring

Scaling & Security

- Day 116: Model Versioning
- Day 117: Scalable AI Systems
- Day 118: Cloud Deployment (AWS/GCP)
- Day 119: Security Best Practices
- Day 120: Review & Practice

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Module 9: Career Preparation

Days 121 – 135. Get ready for the job market. You will polish your resume, LinkedIn and GitHub portfolio, and practise technical interviews, coding rounds and system design for GenAI roles.

Resume, Profile & Portfolio

- Day 121: Resume for GenAI Roles
- Day 122: LinkedIn Optimization
- Day 123: Git & GitHub for AI Projects
- Day 124: Portfolio Building
- Day 125: Technical Interview Prep

Interview Practice

- Day 126: Common GenAI Questions
- Day 127: Live Coding Practice
- Day 128: Case Study Discussions
- Day 129: System Design for AI
- Day 130: Soft Skills & Communication

Mock Interviews & Strategy

- Day 131: Mock Interviews
- Day 132: Resume Review
- Day 133: Interview Feedback
- Day 134: Final Practice Round
- Day 135: Career Strategy & Wrap-Up

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Module 10: Final Project & Innovation

Days 136 – 145. Build your capstone GenAI project from idea to demo. You will define a real-world problem, design and build the solution, document it and present it, then finish with a clear plan for your next steps.

Plan & Build

- Day 136: Define a Real-World Problem
- Day 137: Plan Your GenAI Solution
- Day 138: Build the Core Features
- Day 139: Integrate Advanced Features
- Day 140: Test & Improve

Demo, Document & Present

- Day 141: Prepare Project Demo
- Day 142: Create Documentation
- Day 143: Final Presentation
- Day 144: Share on GitHub/Portfolio
- Day 145: Course Wrap-Up & Next Steps

TOOLS YOU WILL USE

You learn these tools alongside the topics, and every project uses them. Set them up in the first days, so your experiments and apps are part of your work from the start.

01 Jupyter Notebook

EXPERIMENT AND EXPLORE

Jupyter Notebook lets you write code, run it cell by cell and see the output instantly, which makes it the home for data exploration and model experiments.

- Create and run notebooks locally or in the cloud
- Mix code, charts and notes in one place
- Load data with Pandas and plot it
- Install packages and manage environments
- Train small models and check results quickly

02 Hugging Face

MODELS AND DATASETS

Hugging Face is the hub of open models, datasets and demos. You use it to download pretrained models and to publish your own apps.

- Find and download pretrained models
- Use the Transformers library for text and images
- Work with datasets and tokenizers
- Share your demos on Spaces
- Read model cards before you use a model

Why these tools matter

1 Experiment fast
Notebooks let you test ideas and see results instantly.

2 Use proven models
Start from pretrained models instead of from zero.

3 Ship real apps
Put your model in an app that users can open.

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TOOLS YOU WILL USE

You learn these tools alongside the topics, and every project uses them. Set them up in the first days, so your experiments and apps are part of your work from the start.

03 LangChain

BUILDING LLM APPLICATIONS

LangChain connects LLMs with prompts, memory, tools and your own data, so you can build chatbots, RAG systems and agents faster.

- Prompt templates and output parsers
- Chains for multi-step tasks
- Memory for conversations
- Retrievers and vector stores for RAG
- Tools and agents that take actions
- Tracing and debugging your chains

04 Streamlit

AI WEB APPS

Streamlit turns a Python script into a web app in minutes, so you can put your model in front of real users without writing front-end code.

- Build input forms, chat and file upload
- Show charts, tables and images
- Keep state across user actions
- Deploy on Streamlit Cloud or Hugging Face

Before every demo

1 Test your prompts
Try normal, tricky and empty inputs.

2 Check the output
Look for wrong or unsafe answers.

3 Push to GitHub
Commit your work with a clear README.

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6 Real-World GenAI Projects

Apply everything you learn by building six industry-style GenAI projects, from a prompt-based chatbot to RAG systems and AI agents, and finish with a strong portfolio.

PROJECT 01

AI-Powered Chatbot

A conversational chatbot powered by a large language model. You will design prompts, keep conversation memory and wrap everything in a clean chat interface, so it becomes your first complete GenAI application.

Python **LLM API** **LangChain**

- Chat with an LLM through an API
- Conversation memory across messages
- System prompts and role-based behaviour
- Streamlit chat interface
- Safe handling of errors and empty replies
- Prompt templates for different use cases

Skills you will gain: LLM APIs, prompt engineering, LangChain, Streamlit

PROJECT 02

Resume Analyzer

An application that reads a resume and a job description and scores how well they match. You will extract text from files, use embeddings and an LLM, and return clear suggestions for improvement.

Python **NLP** **LLM**

- Upload and parse PDF and DOCX resumes
- Extract skills, experience and education
- Match score against a job description
- LLM-written improvement suggestions
- Keyword gap report for recruiters
- Downloadable summary of the analysis

Skills you will gain: Text extraction, embeddings, prompt design, NLP

PORTFOLIO TIP

Each project is designed from scratch, tested, committed to Git and published on GitHub, ready to show recruiters and interviewers.

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PROJECT 03

Document Q&A System

A question-answering system over your own documents using Retrieval-Augmented Generation. You will split documents, store embeddings in a vector database and answer questions with sources.

RAG | Vector DB | LangChain

- Load and chunk PDF and text documents
- Create embeddings and store them in a vector database
- Retrieve the most relevant passages
- Answers grounded in the documents with sources
- Chat history for follow-up questions
- Simple web interface for uploading files

Skills you will gain: RAG, embeddings, vector databases, LangChain

PROJECT 04

Code Explainer

A tool that explains code in plain language and finds bugs. You will craft prompts for different languages, return step-by-step explanations and present everything in a clean web app.

Python | LLM | Gradio

- Paste code and get a line-by-line explanation
- Bug finding and fix suggestions
- Complexity and improvement tips
- Support for multiple languages
- Few-shot prompts for consistent output
- Gradio interface deployed online

Skills you will gain: Prompt engineering, few-shot prompting, Gradio

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PROJECT 05

Image Generator App

A text-to-image application that turns descriptions into pictures. You will write effective image prompts, control style and size, and build an interface where users can generate and save images.

Stable Diffusion **Python** **Streamlit**

- Text-to-image generation with Stable Diffusion
- Style, size and negative prompt controls
- Image-to-image editing
- Gallery to view and download results
- Prompt history and re-generate option
- Streamlit interface with a loading state

Skills you will gain: Diffusion models, multimodal AI, Streamlit

PROJECT 06

AI Study Buddy

A personal study assistant that summarises topics, creates quizzes and answers doubts. You will combine LLM chains and tools, expose them through an API and connect a simple front end.

LLM **Agents** **FastAPI**

- Summarise notes and chapters
- Auto-generate quizzes and flashcards
- Answer doubts with explanations
- Agent that chooses the right tool
- FastAPI backend with clean endpoints
- Deployed on Hugging Face Spaces or the cloud

Skills you will gain: LLM chains, agents, FastAPI, deployment

How every project is built

1. **Plan** — Define scope and features
2. **Build** — Write clean, working code
3. **Test** — Test prompts and outputs
4. **Deploy** — Deploy it online
5. **Showcase** — Publish on GitHub

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5+
Interviews guaranteed

60+
Hiring companies in our network

Day 1
Placement preparation begins

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How we get you placed

- Placement cell with resume and LinkedIn help, plus referrals
- Mock interviews: technical, system design and HR
- Network of 60+ hiring companies
- Support continues until you are placed

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START YOUR CAREER

We build engineers companies want to hire.

CodeBegun is a Hyderabad edtech team focused on project-based, placement-oriented training. Learn online, or join the offline batch in Madhapur, and leave with a deployed portfolio and interview practice.

PROGRAMME

- 145 days, project-based, with six real-world builds
- Online and offline delivery
- Small batch of 27 students
- Completion certificate after your capstone

PLACEMENT SUPPORT

- Network of 60+ hiring companies
- Placement cell, resume and LinkedIn help, referrals
- Mock interviews: technical, system design, HR
- Support continues until you are placed

Your next steps

STEP 1

Get free counselling. Talk to our team about the batch that fits your schedule.

STEP 2

Talk to a mentor. Review the roadmap and choose online or offline delivery.

STEP 3

Apply and start. Begin with developer fundamentals on Day 1.

✓ **Build job-ready skills** ✓ **Create a strong portfolio** ✓ **Crack interviews** ✓ **Get placed in top companies**

Talk to us

Phone +91 63010 99587
Email contact@codebegun.com
Hiring & admissions hr@codebegun.com
Website www.codebegun.com

Address
Plot No.4, Flat No.102, SM Reddy Complex, House No.1-98/8/9/A, Madhapur, Hyderabad, Telangana 500081

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