

BECOME AN AI ENGINEER – NOT JUST AN AI USER

# Agentic AI Engineering Bootcamp

A premium, in-person **10-week** bootcamp for working software engineers. Build RAG systems, tool-calling pipelines and autonomous agents – then deploy a production-grade AI product. Code from minute one; one evolving capstone from week 1 to week 10.

**10**

weeks, hands-on

**Sat-Sun**

weekends only, 4–5 hrs/day

**Pune**

offline + online access

**≤ 25**

students per cohort

**1**

deployed capstone product

## WHAT YOU'LL BUILD

- LLM apps with streaming responses
- RAG systems on vector databases
- Tool-using autonomous systems
- AI agents & multi-agent workflows
- Context-aware AI assistants with memory
- Production AI apps, deployed live

# Every week ships something real.



Saturday + Sunday · 4-5 hrs/day · one evolving capstone from week 1 → week 10

WEEK

**01·02**

SHIPS ▶

Terminal chatbot with structured outputs

## AI Foundations & Prompt Engineering

*Understand how LLMs work under the hood – and drive them with precision.*

- LLM internals & how GPT works
- Tokens, context windows & cost
- Structured outputs & Pydantic
- First API call – terminal chatbot
- Prompt engineering fundamentals
- Temperature, top-p & sampling

Python 3.12

OpenAI SDK

Pydantic

WEEK

**03**

SHIPS ▶

“Ask my notes” semantic search app

## Context Engineering & Embeddings

*Manage memory and make machines understand meaning, not keywords.*

- Context windows & prompt packing
- What embeddings really are
- Similarity scoring & top-k
- Sliding-window memory
- Semantic vs keyword search
- Build: “Ask my notes”

Embeddings

Semantic search

NumPy

WEEK

**04**

SHIPS ▶

PDF chatbot with citations

## Vector Databases & RAG

*Build production-grade retrieval over your own documents.*

- ChromaDB setup & queries
- Dense retrieval & metadata filters
- PDF chatbot with citations
- Chunking strategies
- RAG architecture, end-to-end
- Multi-document querying

ChromaDB

PyPDF

RAG

WEEK

**05**

SHIPS ▶

Tool-calling orchestrator

## Advanced RAG & Tool Calling

*Sharpen retrieval and let the model take real actions in the world.*

- Query rewriting & hybrid search
- Build tools: calculator, file reader
- AI as an orchestrator
- Re-ranking & context compression
- Function execution loop
- Error & retry handling

Function calling

Hybrid search

Re-ranking

# From agents to production deploy.

WEEKS 06-10 · CONTINUED

## WEEK 06

SHIPS ▶  
Autonomous research agent

### AI Agents

Give your AI autonomy — planning, memory and self-correction.

- Agent lifecycle & reasoning loops
- Short & long-term agent memory
- Tool selection & routing
- Planning, reflection & retry
- Task decomposition
- Build: research agent

Agent loops

Memory stores

ReAct

## WEEK 07

SHIPS ▶  
MCP-powered filesystem assistant

### Multi-Agent Systems & MCP

Coordinate teams of agents and connect them to real systems.

- Supervisor-worker pattern
- What MCP is & why it matters
- Agent-to-agent messaging
- Researcher + summarizer agents
- Set up an MCP server
- AI filesystem assistant

LangGraph

MCP

Multi-agent

## WEEK 08

SHIPS ▶  
Hardened streaming API

### Production Engineering

Make it fast, cheap, safe and ready for real users.

- Latency & cost optimization
- Prompt injection & guardrails
- Caching & token budgeting
- Streaming APIs & rate limiting
- Input sanitization & validation
- Security & safety patterns

Streaming APIs

Guardrails

Rate limiting

## WEEK 09

SHIPS ▶  
Live deploy + eval suite

### Evals & Deployment

Measure quality objectively and ship your system to a public URL.

- Lightweight eval suite
- FastAPI deployment
- Secrets & env management
- Prompt regression testing
- Deploy to Railway / Render
- CI/CD basics

FastAPI

Railway / Render

CI/CD

## WEEK 10

SHIPS ▶  
Deployed AI Engineering Assistant

### Final Capstone & Demo Day

Integrate everything into one deployed product and present it live.

- End-to-end system integration
- Final live demos
- Portfolio & code polish
- Architecture review
- Peer reviews
- Career roadmap discussion

End-to-end

Demo Day

# “AI Engineering Assistant” — your deployed product.



You don't graduate with a certificate — you graduate with a live, working AI product on a public URL, built progressively across all ten weeks.

## Core AI Knowledge

- Chat interface
- Streaming AI responses
- System prompts & context handling
- Conversation memory
- Structured JSON outputs

## Agentic Engineering

- PDF ingestion & semantic search
- Vector database + RAG pipeline
- Multi-document, citation-aware answers
- Task planning & tool-using agents
- Multi-agent + MCP integrations

## Production

- Logging & token tracking
- Lightweight evaluations
- Prompt versioning
- Error handling
- Deployed publicly · portfolio-ready

## WHO IT'S FOR

### Software Engineers

Developers with 2–5 years' experience moving into AI engineering and modern AI application development.

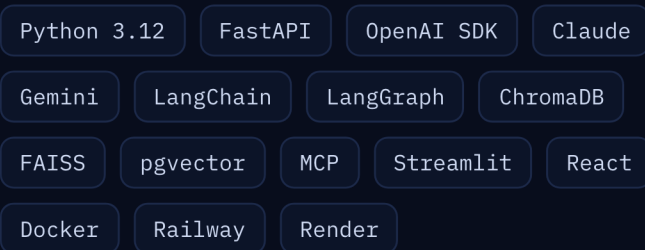
### Backend & Full-Stack

Engineers building intelligent systems, APIs and scalable AI products on top of existing skills.

### Professionals Exploring AI

People already using AI tools who now want to build and deploy AI systems professionally.

## THE STACK YOU'LL USE



## WHY REBINDRISE

- Industry-aligned, code-first curriculum
- 100% in-person, hands-on training
- Real projects you can show off
- Expert mentors — 10+ years in tech
- Small batches, personal attention

## Designed for serious software engineers.

No hand-holding — real engineering depth, from week one.

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