



# Agentic AI Training Program

From Zero to Production-Ready

**40 Hours of Hands-On Learning (Part-Time)**

# The AI Skills Gap & Opportunity

## The Problem

### The Industry Reality:

- Companies need engineers who can ship AI features now
- Most developers don't know how to build production AI systems
- Tutorials teach toy examples, not real deployments
- Theory-heavy courses with minimal hands-on practice

## The Opportunity

### For You:

- Contractors with AI skills command premium rates
- Every client is asking "Can we add AI to this?"
- The gap between knowing Python and building production AI agents is massive

 This program closes that gap in a short time.

# What You'll Actually Build

**5 Labs + Capstone = 6 Deployed Applications**

Module	Project	Skills
Lab 1	AI-Assisted URL Shortener	Vibe Coding, AI tools, full-stack
Lab 2	Code Analyzer Agent	Advanced prompting, structured output
Lab 3	Migration Workflow System	Agent patterns, multi-step reasoning
Lab 4	RAG System + Evaluation	Embeddings, vector DB, metrics
Lab 5	Multi-Agent Orchestration	Supervisor pattern, agent coordination
Capstone	Your Choice (4 options)	Production deployment, integration

- ✓ **Timeline:** 40 hours total, typically completed over 3 weeks part-time (13-15 hours/week)
- ✓ **Plus:** 4 capstone project options + 18+ optional practice projects (2-45 hours each) to continue learning
- ✓ **Each project:** Working GitHub repo + production deployment + real URL to share

# Your Learning Path at a Glance

## 40 Hours Across 5 Modules (3 Weeks Part-Time)

### ✓ Module 1: GenAI Foundations & Vibe Coding

- How LLMs work (practical level)
- Model comparison: Claude vs GPT-4 vs Gemini
- AI-first development methodology
- Tools: Claude Code, Cursor, Copilot
- **Project:** URL Shortener

### ✓ Module 2: Advanced Prompting for Engineering

- Chain-of-Thought, few-shot, self-consistency
- Code-focused prompting (generation, review, debug)
- Multimodal: images, PDFs, screenshots
- Build personal prompt library
- **Project:** Code Analyzer Agent

### ✓ Module 3: Agent Architectures

- Agent loop: Observe → Think → Act
- Memory systems and context management
- ReAct, Planning, Verification patterns
- Multi-agent orchestration
- **Project:** Migration Workflow System

### ✓ Module 4: RAG & Evaluation

- Embeddings, vector databases, chunking strategies
- Evaluation metrics: precision, recall, MRR
- LLM-as-judge evaluation
- Debugging and observability
- **Project:** RAG System with Evaluation

### ✓ Module 5: Production & Capstone

- Rate limiting, caching, security, cost optimization
- Responsible AI and governance
- **Capstone:** Choose from 4 projects (code review bot, documenter, tech debt analyzer, multi-agent system)
- Deploy, demo, showcase

✓ **Philosophy:** Learn by doing. Deploy with each module. Production patterns from module 1.

✓ **Typical Schedule:** 13-15 hours/week over 3 weeks (flexible, self-paced within cohort).

# What Makes This Different?

## 5 Key Differentiators

1. **Zero Theory-Only Content**
  - a. Deploy something real every single day
  - b. Production patterns, not toy examples
2. **LLM-Agnostic Skills**
  - a. Works across Claude, GPT-4, Gemini, local models
  - b. Not locked into one provider
  - c. Skills apply when new models launch
3. **Contractor-Focused**
  - a. Immediately applicable to client projects
  - b. Learn to scope and estimate AI features
  - c. Build portfolio pieces you can show
  - d. Templates for common patterns
4. **Complete Ecosystem**
  - a. 40h curriculum + 5 labs + 9 guides + 7 templates + 18+ exercises
  - b. Both Python AND TypeScript for all labs
  - c. Free and paid API options
5. **Production-Ready**
  - a. Security (prompt injection prevention)
  - b. Cost optimization (60-80% savings)
  - c. Monitoring and observability
  - d. Responsible AI and governance

# Who Should Take This?

## Ideal Participants & Prerequisites

### Primary Audience:

- Senior/experienced software engineers adding AI to skillset
- ML engineers transitioning to LLMs
- Tech leads evaluating AI for teams

### Required Prerequisites:

- Proficiency in Python **OR** TypeScript/JavaScript
- Experience building web apps or APIs
- Comfortable with Git, CLI, cloud deployments
- Understanding of REST APIs and JSON

**No AI experience required.** We start from zero on LLMs.

**Mindset:** You learn by building.

# Technology & Costs

## Choose Your Path

### Languages (Pick One):

- **Python:** FastAPI, Pydantic, ChromaDB
- **TypeScript:** Hono, Zod, OpenAI SDK

### LLM Providers (Pick Any):

- Anthropic Claude, OpenAI GPT-4, Google Gemini, Local (Ollama)

### Deployment:

- Vercel (frontend), Railway (backend), Docker-ready

### Cost Options:

Item	Free	Paid
API usage	\$0 (Gemini free tier)	\$20-60 (GPT-4/Claude)
Deployment	\$0 (free tiers)	Optional
Tools	\$0 (Claude Code)	\$20/mo (Cursor Pro)

# Program Logistics & Preparation

**Duration:** 40 hours total, typically completed over **3 weeks part-time**

- **Flexible schedule:** Work at your own pace within the cohort timeframe
- **5 modules:** Each ~8 hours (theory + hands-on project + deployment)

**Format:**

- Self-paced learning with structured modules
- Live Demo sessions once per week + Slack Channel for support
- Capstone presentation at end of week 3

**Before starting Module 1, complete setup:**

1. Install Python 3.10+ OR Node.js 18+
2. Git and GitHub configured
3. Code editor (VS Code recommended)
4. LLM API keys (free: Google AI Studio / paid: OpenAI or Anthropic)
5. Vercel + Railway accounts (free tier)

**Setup Guide:** [guides/getting-started.md](#) (30-60 min)

**What This Requires:**

- 40 hours over 3 weeks (~13-15h/week)
- Experimentation mindset (try, break, learn)
- Complete each module's project before moving forward

# THANK YOU

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