

# program summary

| Week    | Mode          | Theme                            |
|---------|---------------|----------------------------------|
| Week 1  | Remote        | Admissions + App Building Sprint |
| Week 2  | Remote        | LLM Fundamentals                 |
| Week 3  | Remote        | RAG + Vector DBs                 |
| Week 4  | Remote/Onsite | Agents + LangChain               |
| Week 5  | Remote/Onsite | VibeCoding101 + MCP              |
| Week 6  | Onsite        | LangGraph Workflows              |
| Week 7  | Onsite        | AI-First Mobile Apps             |
| Week 8  | Onsite        | Open Source Models               |
| Week 9  | Onsite        | Demo Day 1 + Review              |
| Week 10 | Onsite        | LLM Internals + Finetuning       |
| Week 11 | Onsite        | Multimodal AI + Debugging        |
| Week 12 | Onsite        | State of AI – Key Milestones     |
| Week 13 | Onsite        | State of AI – Tooling & Infra    |
| Week 14 | Onsite        | Final Capstone + Demo Day        |

# detailed curriculum

## **Week 1:**

### **The Crucible (Admissions + Intensive Application Sprint)**

- Get hands-on with Cursor, v0.dev, Lovable, Windsurf, and Replit
- Build your personal AI-first coding framework
- Clone enterprise apps and add AI features
- Evaluate for BengaluruHQ.

## **Week 2: Remote | 40-45 hrs/week**

### **Getting Fluent with LLMs**

- Deep dive into OpenAI APIs, prompt engineering, token handling, temperature control, and prompt injections
- Understand model behaviors.

## **Week 3: Remote | 40-45 hrs/week**

### **RAG Systems & Reliable Pipelines**

- Build RAG pipelines with GraphRAG and vector DBs
- Learn chunking, embeddings, semantic search, and evaluation metrics.

## **Week 4: Remote/Onsite (optional) | 80 hrs/week**

### **Agentic AI + LangChain**

- Master LangChain and agent architectures
- Use OpenAI Assistant API
- Integrate agents into earlier app clones.

## **Week 5: Remote/Onsite (optional) | 80 hrs/week**

### **Application-Layer AI: VibeCoding101 + MCP + Real-World Setup**

- Learn VibeCoding as the new way to build
- Set up MCP to manage agent workflows
- Configure AI agents for usability in real-world setups.

## **Week 6: Onsite | 80 hrs/week**

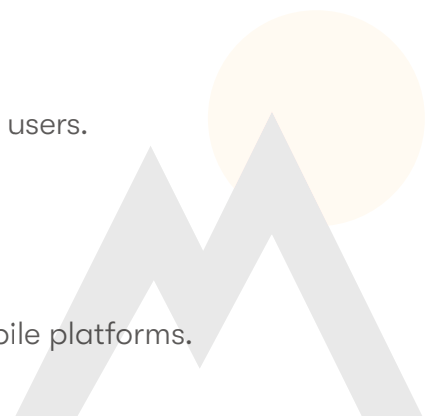
### **AI App Workflows + LangGraph**

- Master LangGraph for building robust multi-agent workflows
- Learn state transitions and build product sense for real-world users.

## **Week 7: Onsite | 80 hrs/week**

### **AI-First Mobile Dev + CrewAI/Swarm**

- Rebuild mobile-first AI apps on iOS/Android
- Learn CrewAI, Swarm, and multi-agent system design on mobile platforms.



**Week 8: Onsite | 80 hrs/week**

**Open Source + Local Model Dev**

- Work with HuggingFace, Ollama, and local LLMs
- Create RAG pipelines and perform semantic search using open-source tools.

**Week 9: Onsite | 80 hrs/week**

**Mid-Capstone + Demo Day #1**

- Build and showcase a mid-capstone app integrating multiple concepts
- Peer + mentor review in a formal demo day setup.

**Week 10: Onsite | 80 hrs/week**

**LLM Internals & Finetuning Techniques**

- Understand LLM internals, hallucinations, jailbreaking, and finetuning using PEFT, QLoRA, and LoRA
- Evaluate and train lightweight models.

**Week 11: Onsite | 80 hrs/week**

**Advanced Debugging + Multimodality**

- Debug LLMs, evaluate prompts, integrate images/audio into apps using GPT-4 Vision and Gemini
- Polish final projects.

**Week 12: Onsite | 80 hrs/week**

**State of AI 1 – Major Shifts in AI Landscape**

- Explore key shifts in AI: from GPT to Claude, LLaMA, Gemini, and open-source movements
- Analyze research papers, product launches, and innovation patterns from 2020–2025.

**Week 13: Onsite | 80 hrs/week**

**State of AI 2 – Tooling, Agents, and Infrastructure**

- Dive deep into advancements in AI tools, open-source agentic systems, RAG architectures, inference optimization, and the business of AI productization.

**Week 14: Onsite | 80 hrs/week**

**Final Capstone + Misogi Demo Day**

- Deliver your AI-first product with full-stack integration
- Present to industry experts, peers, mentors, and hiring partners.

