

■ ZERO | AI Project Roadmap

Phase 0: Foundation (Sep 2025 → Dec 2025)

- Goal: Build strong AI base + MVP summarizer.
- Learn/Do: Python, LLM basics, Vector DB, Streamlit.
- Tech: Python, Hugging Face, LangChain, OpenAI API, ChromaDB, Streamlit.

Phase 1: Applied AI (Jan 2026 → Aug 2026)

- Goal: Multi-feature research assistant.
- Learn/Do: NLP (NER, embeddings), RAG, visualization.
- Tech: PyTorch, LangChain, Pinecone, FastAPI, React, Tailwind, D3.js.

Phase 2: Scaling & Uniqueness (Sep 2026 → Aug 2027)

- Goal: Domain-focused, scalable, lightweight assistant.
- Learn/Do: Fine-tuning open LLMs, pipelines, cloud deployment.
- Tech: PyTorch, Hugging Face PEFT, W&B, Docker, Kubernetes, AWS/GCP, Firebase.

Phase 3: Productization (Sep 2027 → Dec 2027)

- Goal: Launch usable product (ZERO | AI).
- Learn/Do: Optimize models, UI/UX, monetization, security.
- Tech: Next.js, React Native, Redis, Postgres, Stripe, Cloudflare.

Hardware & Budget Notes

- Acer Helios (i5 13th Gen, RTX 4050) is enough for Phase 0–1.
- Phase 2 may need cloud GPUs (~■20k initial budget).

Timeline Clarification

- “25-26” = Sep 2025 → Aug 2026
- “26-27” = Sep 2026 → Aug 2027
- Goal Deadline = Dec 2027