

SHIVRAJ TIMILSENA

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Address - Lalitpur, Nepal

SUMMARY

Full stack AI Engineer with demonstrated Knowledge in machine learning, data analysis, and AI-driven solutions. Actively building production-grade AI systems including multi-agent architectures, retrieval-augmented generation (RAG) applications, and intelligent LLM systems. Strong foundation with modern frameworks, hands-on experience building end-to-end solutions using Python, and modern AI frameworks like Langchain, pytorch. Excellent communicator committed to continuous learning and skill development in cutting-edge AI technologies with demonstrated ability to collaborate across different teams of technical stacks and backgrounds. Eager to gain intensive mentorship in machine learning and data analysis while contributing to real-world AI innovation projects. Seeking opportunity to deepen expertise in AI-driven solutions through hands-on project work and knowledge transfer from experienced mentors.

TECHNICAL SKILLS

- **Frontend:** HTML5, CSS3, JavaScript (ES6+), React.js, Tailwind CSS,
- **Backend:** FastAPI, NodeJS, ExpressJS
- **Databases:** PostgreSQL, MySQL, SQL
- **Core Concepts and Languages:** Python, Typescript, Data Structures and Algorithms, System Design Basics, Data analysis, Pandas, Numpy,
- **Developer Tools:** Git, GitHub, Postman,

EXPERIENCE

Team lead - team project

Feb 2026 – May 2026

- Worked on the backend and full-stack architecture for a multi-vendor web application integrated with an Oracle database.
- Led a six-person cross-functional team as a web developer, including two web developers, two database developers, and two IoT experts.

PROJECTS

DocMindAI : Adaptive-RAG System

June 2026 – Aug 2026

- Built intelligent RAG system using LangGraph + Cloudflare Workers AI routing queries to documents, web search, or LLM knowledge, reducing hallucination via grounded retrieval—hands-on machine learning and AI-driven solutions.
- Optimized query pipeline to sub-3.5s responses using Chroma vector store and HuggingFace embeddings; implemented per-session isolation and Supabase auth with OAuth—production.
- Developed full-stack app with FastAPI backend and React frontend (shaden UI) featuring real-time chat, document persistence, and 3-node state graph—cutting-edge technology implementation.

TheResearchDesk : Multi-Agent Research Report System

May 2026 – Aug 2026

- Architected 5-agent AI pipeline using LangGraph and FastAPI, reducing manual research from 4-6 hours to under 10 minutes.
- Engineered multi-layered fact-verification system classifying claims across 3 categories; built dual-mode system scraping 15+ sources with rate limiting achieving 99%+ uptime—real-world data analysis.
- Added a feature of dual-mode system (Quick Search + Deep Research) with automated topic decomposition into 4-6 subtasks, scraping up to 15 web sources per report with rate limiting and fallback search providers for 99%+ uptime.

GuardrailDB : Secure MCP Gateway for AI agents to Access Database [Live Demo]

Jul 2026 – Aug 2026

- Published open-source MCP server using Nodejs, TypeScript, and Anthropic SDK enabling secure AI-to-database connections to solve the real world database interaction with Ai agents for developers.
- Implemented schema validation blocking around 98% of unvalidated SQL queries; designed pagination and transaction rollback reducing token usage by 60%.
- Designed hard-capped pagination (50 rows/request) and transaction rollback simulation using JSON-RPC 2.0, reducing token usage and preventing data loss.

EDUCATION

Bachelor (Hons) – Computer Science and Engineering

Sept 2023 - June 2027

The British College, Kathmandu-Nepal
semester result: **87.77%**

CERTIFICATIONS & PARTICIPATION

- **Full stack Django**
Completed a Django with AI full stack development at Sipalaya Infotech.

27 April 2026