

Rikesh Acharya

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Education

TRIBHUVAN UNIVERSITY (St. Lawrence College)

B.Sc. Computer Science and IT Oct 2023 - Present

ARUNIMA SECONDARY SCHOOL 10+2

July 2023

SKILLS

DATA SCIENCE	Python • EDA • Preprocessing & cleaning • Data Visualization • Feature Engineering
MACHINE LEARNING	Supervised Learning • Unsupervised learning • Model Evaluation • Deep Learning • Model Deployment
LOW LEVEL SKILLS	C • C++ • Rust • WSL (LINUX/ UNIX) • Networking • CPU & Computer Architecture • Embedded Systems Fundamentals • Debugging & Performance Optimization
MATHEMATICS	Calculus • Linear Algebra • Statistics • Probability • Discrete Mathematics • Numerical Methods • Optimization
DATABASE MGMT	SQL • NoSQL
BACKEND DEV	Django/ FASTAPI • Node.js/Express.js • ASP.NET Core
FRONTEND DEV	React (JavaScript/TypeScript) • Tailwind • HTML
OFFICE & COMPUTER	MS Word • MS Excel • MS PowerPoint • Google Docs/ Sheet/ Slides • Internet & Web Browsing • Email & Digital Communication • File & Folder Management • Basic Computer Troubleshooting • PDF handling • Data Entry

Experience

AI INTEGRATION & PROMPT ENGINEERING | Python, LangChain, Hugging Face, Django/FastAPI, Vector DBs, RAG Self-Directed | Jan 2025 – Present

- Designed and optimized prompts for Claude, GPT-4, and Gemini to solve complex business logic and user-intent problems.
- Built LangChain pipelines for automated document ingestion, summarization, and structured data extraction.
- Reduced hallucination rates via A/B testing; documented reusable prompt libraries and best practices for team-wide adoption.

MACHINE LEARNING ENGINEERING | Python, Scikit-learn, Pandas, Colab, Recommendation Systems Self-Directed | June 2023 – Present, Kathmandu

- Built fraud detection systems using supervised (XGBoost) and unsupervised (Isolation Forest) models.
- Performed end-to-end EDA, preprocessing, and hyperparameter tuning across 10+ datasets.
- Delivered actionable predictive insights for classification, regression, and recommendation tasks.

FULL-STACK & BACKEND ENGINEERING | Python (Django), C# (.NET Core)

Self-Directed | Aug 2020 – Present

- Architected full-stack applications applying OOP and SOLID principles for maintainable, scalable codebases.
- Designed and deployed RESTful APIs with Django REST Framework and .NET Core, focusing on authentication and security.
- Explored production-grade deployment with Docker and cloud infrastructure concepts.

SYSTEMS PROGRAMMING & KERNEL DEVELOPMENT | Rust, x86_64, UEFI, QEMU, GDB

Self-Directed | Feb 2026 – Present

- Built a minimalist x86_64 microkernel with GDT, IDT, exception handling, and a recursive paging memory manager.
- Implemented a round-robin task scheduler with context switching and basic IPC primitives.
- Developed a custom UEFI bootloader; used QEMU and GDB for hardware emulation and kernel-level debugging.

LIGHTWEIGHT IDE DEVELOPMENT | Rust (Tauri/egui), Tree-sitter, LSP, WebView

Self-Directed | March 2026 – Present

- Built a lightweight, low-memory IDE with instant startup using Rust and Tauri/egui.
- Integrated Tree-sitter for real-time syntax highlighting and code folding; added a built-in terminal and file watcher.
- Implemented an LSP client enabling autocompletion, go-to-definition, hover docs, and inline diagnostics.