

Ishan Gautam

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Profile

Computer Engineering student at Pulchowk Campus with a strong focus on Artificial Intelligence, Machine Learning, and Large Language Models. Experienced in developing AI-powered applications, autonomous agents, and data-driven systems using Python, PyTorch, FastAPI, and modern AI frameworks.

Education

Pulchowk Engineering College , B.E. in Computer Engineering – Lalitpur, Nepal • Currently in 6th semester GPA: 3.75 / 4.00	2024 – 2028
Kathmandu Model College (KMC) , +2 Science – Lalitpur, Nepal • GPA: 3.84 / 4.00	2022 – 2024

Professional Experience

Junior Software Developer, DIVAA Luxe Pvt. Ltd.

- Developed and implemented new features for DIVAA's e-commerce platform based on business and customer requirements.
- Improved website performance and responsiveness by optimizing existing components and application workflows.
- Optimized the platform's video-calling feature to provide smoother calls and a more reliable customer experience.

Software Engineering Intern, Institute of Engineering (IOE)

- Developed a **Decision Support System** to enable data-driven academic and administrative decision-making at IOE.
- Designed and implemented data pipelines for aggregating institutional data and transforming it into analytical datasets.
- Built interactive dashboards to visualize key metrics and support operational insights for faculty and administration.

Team Lead, Free Students' Union (FSU), Pulchowk Campus – Web Development Team

- Developed and maintained web applications for student services and organizational workflows.
- Implemented responsive UI components and improved the performance of existing systems using modern web technologies.
- Collaborated with a student engineering team to deliver production-ready features for campus-wide platforms.

Projects

Autonomous Agentic Coder

GitHub

- Developed an AI-powered coding agent capable of autonomous task planning, file manipulation, debugging, and code generation.
- Implemented reasoning loops using **LLMs** to translate natural-language instructions into executable software workflows.
- Integrated tool usage, iterative feedback mechanisms, and multi-step reasoning to improve task-completion accuracy.

2D Multiplayer Metaverse

GitHub

- Built a real-time multiplayer world using **Next.js**, **Socket.IO**, and **WebRTC** for low-latency synchronization.
- Implemented custom server-side state synchronization and dynamic map-collision logic.

EzHost – Secure Local-to-Internet Tunnel

Live Demo | GitHub

- Built a self-hosted tunneling system to securely expose local servers to the internet without port forwarding.
- Engineered a lightweight **Rust** client using outbound **WebSocket** connections to bypass NAT and firewall restrictions, with a relay server routing subdomain requests through database-backed mappings.

Krishi Sahayogi – AI-Powered Agricultural Platform

GitHub

- Built an end-to-end AI platform to assist farmers with crop recommendations, disease detection, market forecasting, and direct buyer access.
- Developed a Smart Farming Advisor using Random Forest, PyTorch (ResNet9) for disease detection, Gemini API for treatment suggestions, and XGBoost for market-price prediction.

3DEngine – Real-Time 3D Model Renderer

GitHub

- Developed a real-time 3D rendering engine in **C/C++** using **OpenGL**, **GLFW**, and **GLAD**, featuring perspective projection, depth testing, and camera-view transformations.
- Engineered a modular pipeline with dedicated **shader**, **mesh**, and **model** systems, importing **.glb** assets via **Assimp** and rendering with custom **GLSL** shaders and **GLM**-based matrix math.

Skills

Languages: Python, C++ , TypeScript, JavaScript, SQL
AI/ML: Machine Learning, Deep Learning, LLMs, AI Agents, RAG, Transformers, PyTorch, TensorFlow, LangChain, OpenAI API
Backend & APIs: FastAPI, Django, Node.js, REST APIs
Databases: PostgreSQL, MongoDB, Redis, SQL
Web: React, Next.js, Tailwind CSS, Socket.IO, WebRTC
Tools: Docker, Git, Linux, Postman, ~~LaTeX~~

Volunteer

Coordinator , IT Club Pulchowk	June 2026 – Present
Executive Member , IEEE Computer Society, Pulchowk Branch	April 2025 – December 2025