

Kushal Pokhrel

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Profile

Highly motivated Computer Engineering student with strong foundations in programming, full stack development, artificial intelligence, and system design. Passionate about building scalable applications and intelligent systems. Seeking opportunities to apply technical expertise, learn advanced technologies, and contribute to impactful real world projects.

Education

Bachelor in Computer Engineering (BE), *National College of Engineering, IOE, TU*

07/2022 – present
Lalitpur, Nepal

Hands-On Experience

- Languages: C, C++, JavaScript, TypeScript, Python
- Frontend: HTML, CSS, Tailwind CSS, React.js, Angular.js
- Backend: Node.js, Express.js
- AI and Machine Learning: RAG architecture, Transformer models, TTS pipelines
- Tools and Technologies: Git, Docker, Postman, MySQL, MongoDB

Professional Experience

Freelance Full Stack Developer

06/2025 – Present
Lalitpur, Nepal

Self-Employed

Co-Founder, Home Tuition Network

01/2025 – 05/2025
Lalitpur, Nepal

Remote

Projects

Major Project: Nepali Text to Speech System (Ongoing)

Developing a high-performance Nepali Text-to-Speech (TTS) system that generates natural, intelligible speech from Nepali text input. The system combines Transformer-based sequence modeling (FlashAttention-2) with EnCodec neural audio decoding to synthesize high-quality audio efficiently. We employ Grapheme-to-Phoneme (G2P) conversion, phoneme embedding, and a context-aware encoder (Wav2Vec-BERT) for accurate prosody and pronunciation. The audio data is sourced from Nepali-language YouTube videos.

Minor Project: HealthGPT

Developed a disease prediction chatbot capable of identifying common medical conditions using Multi Agent RAG architecture.

Multiuser Chat Application

A real time communication platform built using the MERN stack. Features include user registration, authentication, live messaging, profile updates, and a responsive interface.

Evaluation Management System

A full stack system for managing evaluations and feedback. Includes role-based access, form submissions, scoring logic, and user profile operations.

Expense Tracker Application

A CRUD based web application designed to help users manage and record daily expenses. Implements secure authentication, dynamic dashboards, and data visualization components.

Certification

Docker, AI Engineering

Udemy

MERN Development

TechAxis