

YOKISHA POUDEL

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Computer Engineering undergraduate specializing in full-stack development and applied machine learning for healthcare systems. Experienced in building scalable web applications and developing deep learning pipelines for medical image segmentation and predictive health analytics.

EDUCATION

Advanced College of Engineering

Bachelor in Computer Engineering

Kathmandu, Nepal

2022 – 2026

- **Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Artificial Intelligence, Database Management Systems, Software Engineering.

EXPERIENCE

Frontend Engineering Intern

Midas Health Services

Nov 2025 – Feb 2026

Kathmandu, Nepal

- Developed responsive, HIPAA-compliant healthcare dashboards using **React.js** and **TypeScript**, enabling medical professionals to securely access and visualize patient data.
- Improved initial page load times by **40%** by implementing lazy loading, code splitting, and optimizing state management utilizing Redux.
- Collaborated with backend engineers to integrate RESTful APIs, ensuring reliable synchronization of health records across the platform.
- Built reusable UI components from Figma prototypes, strictly adhering to WCAG accessibility guidelines.

PROJECTS

Retinal Disease Segmentation System | PyTorch, U-Net++, Computer Vision

- Implemented a deep learning pipeline to segment Optical Coherence Tomography (OCT) scans, assisting in the early diagnosis of Diabetic Macular diseases.
- Trained **U-Net++** and **Y-Net** architectures on medical imaging datasets, utilizing 5-fold cross-validation to achieve a Dice coefficient of 0.89 for fluid and layer segmentation.
- Applied post-training quantization techniques to reduce model size, optimizing inference speed by **2x** to facilitate deployment on compute-constrained edge devices.

OvaRhythm - AI Health Ecosystem | Flutter, Firebase, LSTM, Python

- Built a cross-platform mobile application using **Flutter** to securely record and visualize users' physiological data.
- Trained a custom **LSTM** neural network for binary cycle anomaly classification on a synthesized dataset of 10,000+ time-series records, achieving a **92% validation accuracy**.
- Integrated an LLM-based API to provide context-aware responses to user queries, improving in-app health information accessibility.

Attendance Pro SaaS | React, TypeScript, Firebase

- Developed a scalable attendance management platform featuring Role-Based Access Control (RBAC) to differentiate admin and employee privileges.
- Automated the generation of weekly attendance PDF reports using Firebase Cloud Functions, replacing manual data entry workflows for institutional admins.

Smart Expense Algorithm | Flutter, Supabase, Dart

- Developed an algorithmic bill-splitting logic capable of dynamically handling uneven weight distributions and multi-currency inputs.
- Utilized **Supabase** for real-time state synchronization across user devices, ensuring reliable database consistency for group finances.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Dart, Python, C++, SQL

Machine Learning & CV: PyTorch, TensorFlow, OpenCV, LSTM, Convolutional Neural Networks, Segmentation

Frontend Frameworks: React.js, Next.js, Flutter, Tailwind CSS, Redux

Backend & Tools: Firebase, Supabase, Git, GitHub, REST APIs, Cloud Functions