Aavash Lamichhane

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Summary

Highly motivated developer with a strong foundation in full-stack development, database architecture, and DevOps. Proficient in Python, TypeScript, and SQL, with hands-on experience building applications using Next.js, Django, FastAPI, and Express. Actively applying and expanding expertise in data analysis and machine learning.

Education

Kathmandu University — *Feb 2022 – Dec 2025 (Expected)*
Bachelor in Computer Engineering

Kathmandu BernHardt Secondary School — *Jul 2019 – Aug 2021*
+2/Higher Secondary Studies

Experience

AI and Backend Engineer — *Mar 2025 – Present*
Dr. Fish

- Developed a robust backend using FastAPI to process and manage real-time data streams from an ESP32-based IoT device, ensuring seamless integration with the frontend user panel
- Trained a fish disease detection model to 95% accuracy using TensorFlow with a refined ResNet architecture, and deployed it to the Hugging Face Hub for scalable, on-demand inference

Event Lead — *Jun 2024 – Dec 2024*
IT Meet, Kathmandu University

- Managed the entire event portfolio for IT MEET 2024, leading a team of 30+ event managers in the design, planning, and execution of over 20 nationwide competitions and workshops
- Orchestrated all operational logistics for the events, from resource allocation to venue management, while serving as the primary communication link between event managers and other core teams to ensure integrated and seamless execution

Projects

Keyo — *Github*
Bringing Eyes to Voices — Track Winner in Data Science/ML, DeerHack 2025

- Engineered a voice-activated computer vision system that processes local camera feeds in real-time to provide audio-based object location and environmental descriptions, operating entirely offline to maximize accessibility and user privacy
- Tools Used: Python, Next.Js, FastAPI, YOLO, MediaPipe, OpenCV

Spinovate — *Github*
Watchdog for bad desk habits — Best Innovation Award, Hack For Nepal 2082

- Designed a webcam-based health tool that provides real-time posture correction by estimating spinal alignment through a regression-based computer vision model, also featuring modules for eye strain prevention and exercise guidance
- Tools Used: Python, Next.Js, FastAPI, MediaPipe, OpenCV

Deep Data Mining Analysis: Diabetic Patient Readmission — *Github*

- Executed a dual-approach data mining analysis on a hospital dataset to predict diabetic patient readmission, developing a stacking ensemble model that achieved 98% accuracy and deploying K-Means clustering to segment patients into four distinct risk profiles , providing a framework for targeted clinical interventions
- Tools Used: Python, Pandas, Numpy, Scikit-Learn, Matplotlib, Seaborn

Skills

Languages: Python, TypeScript, C++, SQL

Technologies: FastAPI, Express.JS, PostgreSQL, TypeORM, Next.Js, Django, Docker

Broad Skills: Machine Learning, Artificial Intelligence, Networking, DevOps, Database Design, Team Management, Event Planning, Communications