Nigam Niraula

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Professional Experience

2025/05 – present Kathmandu, Nepal	**SecurityPal** *Associate Machine Learning Engineer* • Built agentic AI systems using Google ADK, focusing on modular agent design and goal-driven behavior. • Integrated A2A (Agent-to-Agent) communication to enable autonomous coordination and task execution among agents.
2024/08 – 2025/05 Hyderabad, India	**AI Lab IITH** ⊡ *Research Intern* • Worked on Diffusion Model, Conditional Diffusion Models and Indian Styled Content Generation using Diffusion Models
2023/11 – 2024/08 Dhulikhel, Nepal	**Dynamic Image Tagging Project** *Research Intern* • Worked on image detection using CNN and image generation for a given tag using GAN

Education

2024/08 – 2025/05 Hyderabad, Telangana, India	**B. Tech in Computer Science And Engineering** *Indian Institute of Technology, Hyderabad* Academic Exchange Student from KU for Final Year **CGPA** 8.83/10
2020/03 – 2025/05 Dhulikhel, Nepal	**Bachelors in Computer Engineering** *Kathmandu University School of Engineering* **CGPA** 3.96/4

Publication

Hybrid Approach for Enhancing Traffic Signal Control with Computer Vision and Reinforcement Learning ⊡
2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)

Skills

Technical
TensorFlow, PyTorch, Python, Scikit, Keras, Numpy, Pandas, SQL, Javascript, React, NodeJs, C++, GIT, Bash

Research
Deep Learning, Machine Learning, Computer Vision

Projects

Autoffic ⊡
A software for automating the traffic flow of an intersection by controlling the traffic lights via the input through **Computer Vision** and output through **RL**.

Prabigya ⊡
VS code extension to suggest variable names based on the comment by programmers for enhancing readability of program by using **LLM (Bard)**.

Farm App ⊡
Farm App is a inventory management app made using **React Native** for chicken farms to manage eggs, chicken and chicken's feed, water, light, etc.

Ayureye ⊡
Ayureye is a CAD (Computer aided Detection and Diagnosis) system that detects COPD (Common Obstructive Pulmonary Disease) implemented using **ReactJs**, **Django** and **YOLO** architecture.

Prophesy ⧉

A battery monitoring system powered by **RUST** and **ML** for motoring battery status and predicting the battery status using neural network and regression algorithms

SwiftCart ⧉

An e-commerce application that provides a platform for vendors to list their products, customers to browse and purchase items, and facilitate reviews for products utilizing **MERN**.

Certificates

Microdegree™ in Artificial Intelligence ⧉
Fusemachines AI Fellowship 2024

Programming Fundamentals
Duke University, Coursera

Supervised Machine Learning: Regression and Classification
Dr. Andrew NG, Coursera

Effective Public Speaking Training(EPS)
JCI Kavre

Leadership and Activities

- Recipient of AI Fellowship by Fusemachine
- Selected in top 50 participants of Kathmandu Idea and Innovation(KMII)-2080
- Participated as panelist in Scholar Talk-2023 held by Kathmandu University Civil Engineering Club(KUCEC)