

Ansan Rai

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EXPERIENCE

Navodaya Education Innovation Center

Remote

AI / Machine Learning Engineer

Mar 2026 – Present

- Designing and deploying scalable AI solutions and fine-tuning machine learning models to drive educational innovation initiatives.
- Collaborating with cross-functional teams to integrate intelligent systems into production, optimizing inference performance and API responsiveness.

Kyra Works

Oct 2025 – Jan 2026

Machine Learning Engineer Intern

Lalitpur, Nepal

- Designed production-ready ML pipelines by implementing modular data preprocessing and feature engineering workflows, improving model training iteration speed by 30%.
- Developed asynchronous LLM-driven agents using FastAPI and Celery to automate internal operations, reducing manual overhead for the engineering team.
- Optimized backend API design for model serving, focusing on high-concurrency handling and containerizing services via Docker for scalable deployment.

EDUCATION

Kathmandu University

Nepal

Bachelor of Technology in Artificial Intelligence

Dec 2021 – Dec 2025

- **Relevant Coursework:** Data Structures and Algorithms, Deep Learning, Image Processing, Distributed Databases, Operating Systems, Software Engineering.

PROJECTS

Animal Detection & Tracking System | Python, MobileNetV2, OpenCV, Azure

- Developed an end-to-end wildlife monitoring pipeline with a 50k+ image dataset, achieving 82% mAP. Deployed on Azure using containerized microservices for low-latency inference.

Linsight: Privacy-First Local LLM | Llama 3, Ollama, Web Retrieval, Python

- Engineered a local LLM application that integrates real-time web retrieval with privacy-focused models, utilizing asynchronous requests to augment context windows without data leakage.

AWARDS & LEADERSHIP

Winner: KEC Hack-a-LITE

- Led a team of 4 to build a deep learning wildlife detection system; handled the backend infrastructure and deployment strategy using Microsoft Azure.

Mentor: Python Bootcamp & Datathon | KUAIC

- Guided participants through data science workflows, model building, and Python programming fundamentals during community hackathons and training blocks.

Lead: AI & Engineering Workshop

- Instructed 200+ students on transitioning ML models from Jupyter notebooks to production-ready APIs using FastAPI and Docker.

TECHNICAL SKILLS

Languages: Python (Expert), SQL (PostgreSQL/NoSQL), C++, Java, Bash

AI/ML Intelligence: PyTorch, TensorFlow, LangChain, RAG, FAISS, HuggingFace, Computer Vision

Backend & DevOps: FastAPI, Flask, Docker, Redis, Celery, CI/CD (GitHub Actions), GCP, Azure, Linux

Engineering Libs: Pandas, NumPy, Scikit-learn, Pydantic, SQLAlchemy, BeautifulSoup