

Ankit Pokhrel

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AI & ML Enthusiast

Computer Engineering undergraduate specialising in **Artificial Intelligence** and **Machine Learning**, with hands-on experience in **end-to-end ML pipeline development**, data preprocessing, feature engineering, model evaluation, and scalable deployment.

Technical Skills

Languages	: Python, C, C++, JavaScript, SQL
AI Concepts	: Supervised & Unsupervised Learning, Deep Learning, Transformers, NLP, Model Evaluation, Feature Engineering
ML & Data	: PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, LangChain
Frameworks	: FastAPI, Flask, Node.js, Express, React.js
Databases	: PostgreSQL, MongoDB, Firebase Firestore
Tools	: Docker, Git, GitHub, Jupyter Notebook, Streamlit, REST APIs

Experience

Secretary, IT CLUB Pulchowk <i>Lalitpur, Nepal</i>	June 2025 – Present
- Coordinated technical workshops and seminars for engineering students. - Developed Python scripts to automate internal communication and reporting workflows. - Supervised development and maintenance of the IT Club website and digital assets.	
Fellow, Seeds for Future <i>Nepal</i>	June 2025 – July 2025
- Completed intensive training on AI, 5G, Cloud Computing, and digital infrastructure. - Worked on labs involving AI applications and cloud-based systems.	

Education

Bachelors in Computer Engineering <i>IOE, Pulchowk Campus</i>	April 2023 – Present <i>Lalitpur, Nepal</i>
+2 Science <i>Gorkha International Public Secondary School</i>	2020 – 2022 <i>Dang, Nepal</i>

Projects

Network Anomalies detection in Named Data Networking	<i>Ongoing Research Project</i>
Research project under Prof. Babu Ram Dhawadi focused on anomaly detection in Named Data Networking (NDN) architectures. - Implemented an Isolation Forest-based behavioral analysis model to identify abnormal traffic patterns and malicious interest-data flows.	
Transformer Architecture Implementation	<i>Python, PyTorch, NLP</i> Source Code
- Implemented a Transformer model from scratch using PyTorch for sequence-to-sequence NLP tasks. - Built core components including multi-head attention, positional encoding, and feed-forward networks. - Strengthened understanding of attention mechanisms and modern deep learning architectures.	
Nagarik Suchana	<i>React Native, Node.js, PostgreSQL</i> Source Code
Built a civic engagement mobile app connecting citizens with local authorities for notices, grievances, and governance transparency.	

- Implemented **authentication, grievance management, admin dashboard**, and **multilingual support (English/Nepali)**.
- Integrated **OCR using Tesseract.js** for document processing; containerized services using Docker.

Kanun Sathi – AI Legal Assistant

FastAPI, RAG, LangChain

[Source Code](#)

- Developed an **AI-powered legal assistant** providing constitutionally grounded answers for Nepali citizens.
- Implemented **Retrieval-Augmented Generation (RAG)** pipeline using LangChain and Gemini API for validated legal responses.
- Designed scalable backend with FastAPI and integrated PostgreSQL for document and query storage.

Infant Cry Detection

Python, TensorFlow, Audio Processing

[Source Code](#)

- Developed a neural-network-based system to classify infant cries using **MFCC feature extraction**.
- Trained models to distinguish cry categories such as **hunger, pain**, and **discomfort**.
- Applied audio preprocessing, feature normalization, and model evaluation techniques.

Achievements

- **1st Runner-Up – National Hackathon (2025)**: Secured 1st Runner-Up position in the hackathon held alongside the **4th National Telemedicine and 1st National Digital Health Conference**, contributing innovative solutions in digital health and telemedicine.
- **Best 1st-Year Electronics Project Award**: Received certificate and cash prize for developing a **Parking Management System using Arduino**

Certifications

- [Machine Learning – Coursera](#)
- [Meta Front-End Development – Coursera](#)
- [Coding and Programming with Python – Samsung Innovation College](#)