

Tirtha Singh Khadka Chhetri

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PROFESSIONAL SUMMARY

Computer Engineering graduate with hands-on experience delivering production-grade AI applications, secure backend systems, and cross-platform mobile solutions. Proficient in Python, TensorFlow, FastAPI, and Flutter with a proven record of integrating LLM APIs, designing REST backends, and deploying end-to-end ML pipelines across the full development lifecycle.

EDUCATION

Pokhara University — B.E. in Computer Engineering

Feb 2022 – Mar 2026

CGPA: 3.70/4.00 | Dean's List | Coursework: AI, Machine Learning, Deep Learning, Data Structures & Algorithms, DBMS, Computer Networks, OS, Software Engineering.

PROFESSIONAL EXPERIENCE

Wow Finstack Company | Backend Developer

May 2024 – Aug 2024

Pokhara, Nepal

- Architected and deployed RESTful APIs across multiple production apps, enhancing scalability and reliability.
- Implemented JWT-based authentication and Role-Based Access Control (RBAC) for secure multi-tier access.
- Optimised database schemas and SQL query execution, reducing data retrieval latency in live services.
- Integrated AI-ready and third-party APIs into backend workflows, enabling intelligent automation pipelines.
- Monitored production deployments, diagnosed backend failures, and maintained consistent service uptime.

KEY PROJECTS

Lung Disease Detection System Python · TensorFlow · CNN · U-Net · FastAPI · Flutter · DeepSeek API

- Engineered an AI medical imaging platform detecting pneumonia & TB from chest X-rays; achieved **95% accuracy**.
- Curated and preprocessed clinical datasets; trained and optimised deep learning models for production inference.
- Deployed models via FastAPI backend with real-time inference, integrated into a cross-platform Flutter mobile app.
- Integrated DeepSeek API-powered chatbot providing automated lung health guidance within the mobile application.

Ride Sharing Application Flutter · Node.js · MySQL · OSRM · REST APIs · Geolocation

- Built a full-stack ride-sharing platform with real-time GPS tracking, OSRM route optimisation, and fare estimation, achieving **5 meter average location accuracy** using OpenStreetMap-based services.
- Developed authenticated user and driver management with profile handling, RBAC, and session control.
- Integrated live location services and routing logic for accurate navigation and seamless trip calculations.

TECHNICAL SKILLS

Languages	Python, C/C++, Java, SQL, Dart
AI / ML	TensorFlow, Keras, PyTorch, Scikit-learn, CNNs, U-Net, Deep Learning
LLM & AI Systems	Prompt Engineering, LLM API Integration, Inference Pipelines, AI System Design
Backend	FastAPI, Node.js, Express.js, REST APIs, JWT, RBAC, MySQL, Firebase, Microservices
Mobile	Flutter, Cross-Platform Development, Geolocation & Mapping APIs
Software Eng.	Data Structures & Algorithms, System Design, Distributed Systems, Unit Testing, Agile
Tools	Git, Postman, Linux, Pandas, NumPy, Jupyter Notebook

ACHIEVEMENTS

- Graduated with **3.70 CGPA** and Dean's List distinction, reflecting consistent academic excellence.
- Completed 7-day training session for teachers and students on Cyber Security and Artificial Intelligence.
- Shipped a production-grade AI medical imaging app spanning model training, FastAPI backend, and Flutter delivery.
- Delivered a complete full-stack ride-sharing platform with real-time tracking, routing, and multi-role management.
- Gained industry experience architecting scalable backend APIs in a live production environment at Wow Finstack.
- Recognised for leadership and performance in inter-college Volleyball and Badminton tournaments.

LANGUAGES & INTERESTS

Languages: English (Proficient) · Hindi (Proficient)

Interests: Badminton & Volleyball · Singing, Guitar & Piano · Videography · Trekking & Hiking