



Abhinna Manandhar

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Education

University at Buffalo, State University of New York

May 2026

Master's of Science (MS) in Computer Science and Engineering

- **Coursework:** CSE 547 Intro to ML, CSE 531 Algorithm Analysis and Design, CSE 590 Computer Architecture

Coventry University,

November 2023

Bachelor of Science with Honours (BSc. Hons) in Computing

- Grade: First-Class Honours
- **Thesis:** Blockchain Technology to Improve Security and Accessibility of Electronic Health Records

Experience

Research Assistant, Department of Earth Sciences – University at Buffalo

Apr 2025 – Present

- Developed a computer-vision pipeline using YOLOv8, OpenCV, and Gemini 2.5 Flash LLM, increasing citizen-science contributions by 60% and reducing contributor churn by 20%.
- Orchestrated the server and database migration from UB's SENS server to the new CASet Linux server.

Mid-Software Engineer, Codavatar Tech Pvt. Ltd. – Kathmandu, Nepal

Aug 2024 – Jan 2025

- Led the architecture and development of a new billing microservice, facilitating transactions for 10,000+ users with minimal impact to the performance and stability of the existing system for Krispcall, a VoIP SaaS.
- Developed a subscription management framework for Stripe Integration (using Subscriptions, Payment Intents, Proration, and Metered Billing for SMS and voice services) – enabling the support team to resolve billing tickets 2x faster and reducing billing ticket volume by 30%.
- Led a team of 8 junior engineers to deliver key features with close coordination with product and support teams.

Associate Software Engineer, Codavatar Tech Pvt. Ltd. – Kathmandu, Nepal

March 2023 – Aug 2024

- Implemented call barging, call whispering, SMS, and SMS forwarding VoIP features using Twilio, handling 50,000+ minutes of daily call time with high reliability.
- Developed a support notification system by integrating Slack's third-party API to streamline the company's support process, reducing resolution time by 40%.

Skills

Programming Languages: Python | Javascript | C | C++ | Java | Dart

Systems: Linux/Unix | Networking | Distributed Systems | Redis | Docker | Hadoop | MapReduce | Spark

Frameworks: FastAPI | GraphQL | REST | gRPC | Tailwind | React | Flutter | Git | Github Actions & CI/CD

Data Tools: Pandas | Matplotlib | Scikit-Learn | TensorFlow | YOLOv8 | Google Gemini

Projects

Ultimate Python, Open-Source Contribution (5000+ stars Github)

<https://github.com>

- Created educational content about Encapsulation in Object Oriented Programming (OOP) in Python.
- Collaborated with the project's maintainer, Staff Software Engineer at Tesla, and former Staff Software Engineer at LinkedIn.

Ride Sharing Web & Mobile Application

<https://youtube.com>

- Developed a cross-platform ride sharing mobile application in Flutter (Android, IOS, and WearOS), along with a response web UI using React and Tailwind and NodeJS.
- Integrated Google Maps Platform services (Place Auto-complete, Directions, Distance, and Maps) to improve Location UX and pricing accuracy.