

Dipendra Thapa

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Summary

Software Engineering student focused on building low-latency AI systems, real-time applications, and decentralized infrastructure. Passionate about developing production-ready solutions with measurable performance and scalability.

Skills

Languages: Python, C++, JavaScript

Frameworks: React, Flutter

Tools: Firebase, Git, TensorFlow

Concepts: Machine Learning, Multi-task Learning, SMOTE, Web3

Projects

CPU-Only Multi-Task AI System

- Developed a multi-task deep learning model predicting age, gender, and ethnicity in a single forward pass.
- Optimized for CPU-only deployment achieving inference latency under 100ms.
- Eliminated GPU dependency while maintaining competitive accuracy.

VibeStream — YouTube Audio Queue System

- Built a distraction-free audio streaming web app with real-time queue management.
- Achieved sub-second load performance using modern frontend tooling.
- Implemented state management using React and Zustand.

SolPayX — Decentralized Remittance System

- Developed a Solana-based payment system enabling instant USDC transfers.
- Reduced transaction fees to near-zero with no banking intermediaries.
- Explored decentralized finance (DeFi) concepts in real-world use cases.

Heart Disease Prediction System

- Built a machine learning model using WHO STEPS Nepal dataset.
- Applied SMOTE to handle class imbalance and improve recall.
- Deployed an interactive interface using Streamlit.

Education

Pokhara University

Bachelor's in Software Engineering

Nepal