

NISHA KIRAN GNAWALY

ML Engineer- Backend Architect - Radar Systems Researcher

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*Dedicated to driving automation through ML and robust backend systems. Currently focused on the intersection of **Radar Signal Processing and Computer Vision** to advance environmental perception in autonomous robotics.*

EXPERIENCE

Backend Developer

Apr 2025 – Sep 2025

IT Expert Nepal P. Ltd.

- Worked in production deployment and backend implementation, improving release speed by up to 60%.
- Managed a security-focused object detection project in collaboration with Honeywell Pro, ensuring reliable system performance.

DevOps Intern

Mar 2024 – May 2024

Nest Nepal

- Managed cloud infrastructure and web hosting environments, including server configuration, domain setup, and performance optimization.
- Automated bulk website migrations by generating server-side inventories and scripts, significantly reducing manual effort and minimizing downtime.

Data Science Intern

May 2024 – Jun 2024

Codesoft, India

Implemented supervised learning pipelines for predictive analytics, covering feature engineering, model selection, and performance evaluation.

EDUCATION

Bachelor in Information Technology (BIT)

May 2021 – Sep 2025

Patan Multiple Campus, Tribhuvan University, Kathmandu

Masters In Information Technology

Tribhuvan University

ongoing

TECHNICAL PROJECTS

NEPSE ML Trading System — Full-Stack Financial Trading Platform

2025 – 2026

React, TypeScript, FastAPI, scikit-learn, XGBoost, LSTM

- Built ML models for 1–10 day price predictions using XGBoost, LSTM, Random Forest, SVM, and 25+ technical indicators.
- Developed full-stack system using React 19, TypeScript, TailwindCSS, Zustand, TanStack Query, FastAPI, 48+ REST APIs, and JWT authentication.
- Created automated data pipelines from ShareSansar, MeroLagani, NEPSE Official with SQLite/CSV storage and daily updates.
- Implemented walk-forward backtesting and multi-strategy AI recommendations.

Autonomous Navigation via Neuroevolution (NEAT & OpenCV)

Developed a self-driving simulation where agents evolve neural network topologies using genetic algorithms to navigate complex environments.

Bilingual Mental Health Diagnostic Platform

Developed an easy-to-use mental health assessment system for the Nepal Government Health Department based on WHO-5, PHQ-9 and GAD-7 standards.

Cine Marga

Built movie rating and recommendation system using Django + PostgreSQL.

TRAINING AND ACHIEVEMENTS

Python Programming

2025

GeeksforGeeks

Hands-on experience with NumPy, Pandas, scikit-learn, Matplotlib, databases (MySQL, MongoDB), APIs, file handling (CSV, Excel, JSON), and Tkinter applications.

Supervised Machine Learning

2024

Stanford University (Coursera, Dr. Andrew Ng)

Studied and applied core supervised learning algorithms including linear and logistic regression on real-world datasets.

Data Science Bootcamp

2025

GeeksforGeeks

Gained practical experience in data analysis, statistics, EDA, visualization, and machine learning models such as regression, decision trees, and clustering.

Integrating Geospatial Technologies in Climate-Smart Agriculture Management

2024

Purvanchal University

Applied GIS, GPS, and remote sensing to perform spatial analysis, crop monitoring, and resource optimization using diverse environmental datasets.

SKILLS

Programming: Python (Django, Flask), C++, Java, JavaScript, SQL, HTML5/CSS3

Machine Learning & AI: Machine Learning, Deep Learning, NLP, Computer Vision, LLMs, RAGs, scikit-learn, PyTorch, TensorFlow

Vision & Data Science: OpenCV, YOLOv8, Pandas, NumPy, Data Analysis

Databases: MySQL, Relational Databases

Systems & Tools: Linux/Unix, Git/GitHub, Docker, Version Control

Productivity Tools: Microsoft Excel, Microsoft Word, Windows

LANGUAGES

- Nepali (Native)
- English
- Chinese (Proficient)