

Prabhat Ghimire

☎ (+977) 9840264502 | ✉ prabhatghimire7@gmail.com | 🌐 prabhatghm.com.np | 🔗 LinkedIn

Education

Pokhara University, School of Engineering

Pokhara, Nepal

B.Eng. in Computer Engineering

2021 – 2026

Experience

Research & Development Intern

YHH IT Solutions

May 2025 – Oct 2025

- Conducted structured research on datasets and analytical techniques for AI-driven prototype development
- Collected, cleaned, and validated structured and unstructured datasets to support experimental workflows
- Designed data processing pipelines improving experimental efficiency and reproducibility
- Built structured evaluation frameworks to compare model performance and extract meaningful insights
- Prepared technical summaries, reports, and visual materials to support internal decision-making
- Collaborated with cross-functional team members to refine analytical goals and research requirements

Python / Machine Learning Intern

Together We Can, Nepal

Nov 2023 – April 2024

- Developed predictive ML pipelines with optimized training workflows and improved model accuracy
- Designed feature engineering processes handling 20+ structured performance indicators
- Built RESTful APIs (Django) ensuring efficient database querying and structured data exchange
- Documented model assumptions, analytical findings, and limitations in structured technical reports
- Assisted in experimentation, testing, and iterative improvement of predictive models

Secondary Level Teacher (Computer Science)

Junior Citizen Academy, Pokhara

Current

- Teaching Computer Science to secondary-level students, simplifying complex technical concepts into structured lessons
- Designing lesson plans and evaluation methods to assess understanding and learning progression

Secondary Level Teacher (Computer Science)

Tamakoshi English Boarding School

Sep 2021 – Sep 2022

- Taught Computer Science to students from Grade 5–10, simplifying complex technical concepts into structured lessons
- Designed lesson plans and evaluation methods to assess understanding and learning progression
- Contributed to academic planning, student evaluation, and overall classroom management

Projects

Capstone Project: Extending GPWS through Probabilistic Machine Learning for Early CFIT Detection

- Conducted research on probabilistic machine learning methods to improve aviation safety prediction systems
- Applied temporal pattern analysis and rare-event modeling for risk prediction
- Used simulation-based data augmentation to address class imbalance
- Prototyped and validated the framework using simulated data, achieving early warnings ~100 seconds before potential collision

Race Analytics: Predicting F1 Champions Using Machine Learning

- Processed and structured 25,000+ race data entries from multiple sources
- Cleaned inconsistent datasets, handled missing values, and engineered high-impact predictive features
- Built exploratory dashboards to analyze performance trends and anomaly patterns
- Improved model prediction accuracy by 15% and reduced training time by 20%
- Designed visual outputs using Matplotlib and deployed an interactive interface via Gradio

Skills

Programming Languages: Python

Machine Learning: Scikit-learn, TensorFlow, PyTorch, Linear Algebra, Probability and Statistics

Research & Analysis: Data Cleaning, EDA, Feature Engineering, Hypothesis Testing, Model Evaluation, Research Documentation

Tools & Frameworks: Pandas, NumPy, Matplotlib, Jupyter Notebook, Excel, Google Sheets, Git, GitHub

Web & Deployment: Django, Django REST Framework

Databases: MySQL, SQLite