

Firoj Paudel

Kathmandu, Nepal | <https://www.linkedin.com/in/firoj-paudel-17a66724b/> | firojpaudel.professional@gmail.com |
<https://github.com/Firojpaudel> | <https://firojpaudel.com.np> | +977 9741661176

EDUCATION

Bachelor of Science in Computer Science and Information Technology

2022 - Present

Madan Bhandari Memorial College

Kathmandu, Nepal

- Areas of Interest: Agents, Calculus, Statistics, AI and Machine Learning

PUBLICATIONS

Fragile Mastery: On Device Language Models

16 March, 2025

- Proposal of Generalized Edge Model (GEM) to optimize on-device language models for resource-constrained edge devices, balancing specialization and generalization across diverse domains.

Thinking About Thinking: Inverse Reasoning For Self-Aware Models

30 June, 2025

- Introduction of SAGE-nano's Inverse Reasoning for improved model interpretability, enhancing reasoning accuracy and explanation quality.

EXPERIENCE

Co-Founder and CRO

May 2025 - Present

SAGEA

Kathmandu, Nepal

- Working on the development of advanced Text-to-Speech (TTS) models with multilingual capabilities, enhancing speech synthesis accuracy, naturalness, and fluidity across diverse languages and dialects to enable seamless cross-lingual communication
- Researching reasoning models, with a focus on developing concepts like Inverse Reasoning.

Research Scientist

June 2025 - Present

NeuraGuard

Kathmandu, Nepal

- Developed a multi-agent phishing website detection pipeline with **92% accuracy**, expanding to email filtering and exploring deep web monitoring for scalable security solutions.

Data Science and Machine Learning Fellow

April 2025 - July 2025

Fellowship.ai

San Francisco, CA

- Developed a **high-accuracy web agent** for **real estate** and **financial data extraction** using **Playwright**, **Chromium**, and **Pydantic Schemas**, achieving 87+% task automation accuracy.
- Transitioned from **SmolAgent MVP** to a **scalable production solution** for efficient local deployment.

SKILLS

- **Programming Languages:** *Python*, C++, C, JavaScript, *CUDA*.
- **Technologies:** *PyTorch*, *Transformers*, LangChain, Keras, Scikit-learn, Numpy, Matplotlib, Seaborn, Pandas, SQL, Git.
- **Languages:** Nepali, *English*, Hindi.

LEADERSHIP EXPERIENCE

General Manager @ MBM IdeaX 2024

June 2024 - Sep 2024

- Organized a nationwide **hackathon** in Nepal. My major task was to organize the hackers and my organizing team.

NOTABLE PROJECTS

Brain Tumor Detection

- Created a CNN based project for brain tumor detection from medical MRI images

Fine-tuned Customer Support Chatbot

- Streamlit app using BART-base fine-tuned on Bitext customer support dataset, backed by SQLite3.

*Please visit my portfolio for more info: [Portfolio](#)