Nadika Poudel

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EXPERIENCE

- **Upwork** *July 2024 - Present*
  Freelance ML/AI Developer Remote | Part-time
  – Worked on automatic evaluation of descriptive answers using Llama3.1 with RAG and Agentic workflow. Authored tutorials on cutting-edge technologies in NLP topics such as Retrieval-Augmented Generation (RAG) with LLaMA-3.1, Graph RAG, Binary Quantization, LLaMA-3 and Phi-3 architecture, Pytorch, LLamaCPP, etc.

- **NAAMII** *August 2024 - Present*
  NLP Research Intern Lalitpur, Nepal | Part-time
  – Conducting research on Hate Speech Detection Challenge, employing advanced data augmentation techniques such as contextual filtering with BERT cosine similarity and LLM-based augmentation.Utilizing LoRA fine-tuning to enhance LLM performance for accurate hate speech detection in Devnagari scripts including Nepali and Hindi.

- **ICEBRKR** *April - July 2024*
  Junior Machine Learning Engineer Lalitpur,Nepal
  – Developed NLP systems to enhance the app's messaging features, including fine-tuning T5 model to generate dynamic chat phrases and compared performance with different LLMs.
  – Managed the complete machine learning pipeline from dataset creation to FASTAPI endpoint deployment. Collaborated with the backend team to integrate these endpoints into the overall system architecture.

- **UXCam** *May 2023 - July 2023*
  Backend Engineer Trainee Kathmandu,Nepal
  – Developed and maintained RESTful APIs using Django REST Framework, implementing viewsets, routing, and authentication to ensure secure and efficient data handling. Conducted API testing with Postman to ensure reliability and performance.
  – Utilized PostgreSQL and MongoDB for database management, handling data storage and retrieval efficiently.

EDUCATION

- **Institute of Engineering, Pulchowk Campus** *2019 - 2024*
  Bachelors in Computer Engineering Aggregate: 82.9%
  – Relevant Courses: Human Language Technology, Bigdata, Enterprise Computing,DSA, COA,AI, Operating System, Distributed System, Computer Network, Computer Graphics, Microprocessor, OOP, C programming

PERSONAL PROJECTS

- **Grievance Recognition using Text/Speech** *September 2023 - Present*
  Classifies Nepali voice and text complaints received on Nepal Government portals GitHub
  – Finetuned Wav2Vec for Automatic Speech Recognition of Nepali voice complaints giving Nepali text output which further goes under multi-class classification model developed by finetuning Nepali BERT on HelloSarkar dataset.

- **Medical Jargons Simplification App** *June 2024*
  NLP project focused on translating complex medical jargons into simple terms GitHub
  – Translated Medical reports and texts into simple terms using fine-tuned T5 model and LLM. Implemented chatbot using RAG to explain medical jargons with LangChain and Llama3.

TECHNICAL SKILLS

Machine Learning, NLP, Python, Pandas, Numpy, PyTorch, LangChain,Django, FastAPI, LLMs, Git, SQL, PostgreSQL, MongoDB, AWS, Azure,C,C++

CERTIFICATIONS

- Microdegree in Machine Learning|Fusemachines| May 2023
- Microdegree in NLP | Fusemachines | Jan 2024
- Microdegree in Deep Learning | Fusemachines | Aug 2023
- 4th Annual Nepal AI School by NAAMII | June 2023

ACHIEVEMENTS

- World Finalist at Microsoft Imagine Cup 2023
- Generation Google APAC'22 Scholar
- National Representative to Thailand on Seeds for Future
- Winner at Hitachi Technergy- Energy Forecasting
- Winner at U-TEC Hackathon and LOCUS Hack-a-Week
- 1st Runner-up at Ace-Ignite Hackathon