

Shashin Maharjan

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SUMMARY

AI Practitioner with strong expertise in Machine Learning, Deep Learning, and NLP. Proficient in Python and PyTorch, with experience leading research-driven projects and collaborating with cross-functional teams. Seeking a dynamic environment to apply skills in developing impactful AI solutions.

TECHNICAL SKILLS

Languages	Python, C/C++, JavaScript, HTML5, CSS3
AI/ML	Scikit-Learn, PyTorch, PyTorch Lightning, Lightning Fabric, OpenCV, NLTK, HuggingFace, LangChain, LangGraph, SmolAgent
Web	Flask, FastAPI, Litserve, Streamlit, Gradio
Database	MySQL, Pinecone
Tools	Git, GitHub, CometML, Docker, LucidChart

EXPERIENCE

Fusemachines

AI Fellowship (Remote)

Apr 2024 – Oct 2024

- Worked on **ML**, **NLP**, and **LLMs**
- Built a **RAG system** and a **multi-agent system** using **LangChain**, **LlamaIndex**, and OpenAI/Gemini APIs
- Conducted research and leading a team of 3 members to develop an **Automatic Speech Recognition (ASR)** system, integrating **Speech Emotion Recognition (SER)** and **Text Summarization**

Fusemachines

AI Intern (Remote)

Baneshwor, Kathmandu

May 2025 – Present

- Enhanced **Fuse Academics Fellowship Proctoring System** by integrating **WhisperX**, significantly improving speech transcription latency
- Researching **Representation Learning** and **Agentic AI** with focus on autonomy, planning, and tool use
- Collaborating with mentors and managing content to support **AI Fellowship 2025** students

PROJECTS

Neural Machine Translation 🌀

Dec 2024 – Jan 2025

Python, PyTorch Lightning

- Built **RNN-based seq2seq model with attention** for English-Nepali translation
- Trained a **BiLSTM encoder-LSTM decoder with attention** on **900k parallel sentence pairs**, achieving SacreBLEU scores of **32.14** (nep-eng) and **18.05** (eng-nep) to optimize translation quality

Vocal Mind 🌀

May 2024 – Oct 2024

Python, PyTorch, PyTorch Lightning, Hugging Face Transformers, Gradio, Flask

- Built a unified system for **ASR**, speech sentiment analysis, and text summarization with real-time Flask frontend
- Trained **Conformer-CTC-Small** model on **2,900 hours** of audio and **1.2M** utterances
- Reduced WER from **26.42%** to **14.34%** on LibriSpeech Test using **CTC Decoder** and **4-gram KenLM** decoding

Text Sentiment Analysis 🌀 ↗

Dec 2023 – Apr 2024

PyTorch, Hugging Face, Spacy, Streamlit

- Performed sentiment analysis with **RNN-based models**, **attention mechanisms** and embeddings
- Trained models on TMDb Movie and Yelp datasets for binary and multiclass sentiment analysis using Tweet data
- Improved accuracy to **94.45%** by fine-tuning **DistilBERT-base** and **RoBERTa-base** from **Hugging Face**

EDUCATION

National College of Engineering

Bachelor of Computer Engineering

Talchhikhel, Lalitpur

2019 – 2024