Shreyas Dhakal

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CAREER SUMMARY

Master student studying Artificial Intelligence and Machine Learning. Experienced in building multi-agent systems, end-to-end computer vision pipelines, and reproducible research workflows. Strong foundation in AI agentic systems, orchestration, and computer vision concepts.

EXPERIENCE

Research Scholar - Conversational Agents in Water Engineering

Adelaide University | May 2026 - Present | Supervisor: Dr. Babak Zolghadr-Asli and Seyed Hossein Hosseini

- Implementing the concept of LLM negotiation agents against NSGA-II optimization for water resource allocation using Langchain and multi-agent collaboration systems.

AI Engineer

xval.ai | February 2025 - August 2025

- Performed research in the agentic framework pipeline to automate course generation using Langchain, Gen AI, and frameworks.
- Developed pipelines using RAGs, MCPs and vector databases for AI agent interaction and information retrieval.

Full Stack Web Developer

CodeCraft Web Solutions | July 2024 - December 2024

- Developed a hospital website using PHP and Laravel, including CRUD operations and CRM.
- Developed and maintained the system on a production server, handling configuration, debugging, and performance optimization.
- Managed a team of developers and oversaw the project lifecycle from conception to deployment.

Internship in Machine Learning

SMTM Capital | May 2023 - November 2023

- Research and development of machine learning techniques and algorithms for technical analysis of stocks.
- Development of various scripts(trends, support resistances, etc) for time series analysis of stocks.
- Built backend systems to deploy technical analysis results in live server using NodeJS backend and Redis database.

PROJECTS

Content Generation using LLMs and GenAI

- Use of Langchain, RAGs, data mining, and LLM frameworks to develop Coursera-like content from a set of relevant documents related to urban mobility systems.

Rubric based Multi Persona Agents System for Context Based Text Evaluation

- Multi-judge AI agentic system with hierarchical aggregation to evaluate texts using multiple rubrics and audience appropriateness with constraint feedback.

Smart Parking Management System

- Development of computer vision pipelines using CNNs and YOLOv8 to detect license number plates with an accuracy of 94.5%.
- Development of computer vision based real time vehicle parking space occupancy detection using YOLOv8 along with mobile and web app system.

EDUCATION

Master of Artificial Intelligence and Machine Learning | Adelaide University **|**February 2026 - present

Bachelors of Computer Engineering | Tribhuvan University **|**November 2019 - July 2024

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, JavaScript, PHP, R
- **Machine Learning & AI:** PyTorch, LangGraph, Langchain, Scikit-Learn, Pandas, NumPy, Matplotlib, OpenAI SDK
- **Tools & Automation:** FastAPI, Git, Docker, CI/CD, JupyterLab, NodeJS, FireCrawl

References available on request