

Rojan Dahal

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Erie, PA

EDUCATION

Gannon University, Erie, PA, USA

Dec 2025

Master of Science in Computer and Information Science

Major: Data Science

Grade: GPA 4

London Metropolitan University, Nepal

Dec 2021

Bachelor of Science (Hons.) Computing

Grade: First Class Honors

WORK EXPERIENCE

Gannon University, Erie, PA, USA

Jan 2024 – May 2024

Student Research Assistant

- Conducting research and development of a Convolutional Neural Network (CNN) model for leveling printing surfaces on metal 3D printers, resulting in enhanced printing quality and reduced material waste.
- Documenting research findings, methodologies, and model development processes, ensuring knowledge sharing and reproducibility.

BitsKraft Pvt. Ltd., Kathmandu, Nepal

Nov 2021 – Nov 2023

AI/ML Engineer (Research and Development Department)

- Engineered a face analytics tool which analyzes videos for face verification, emotion detection, liveness, and eye blink counts, achieving 95% accuracy rate in face verification.
- Developed and deployed a REST API for document classification, facilitating seamless integration into third party platforms like video banking and workflow managements systems.
- Improved document classification accuracy by 25% by constructing a document management platform capable of classifying and categorizing documents upon upload, using a CNN model to recognize documents in various formats.
- Achieved a 90% accuracy rate in bank cheques signature verification by training an AI model using YOLOv5, resulting in reduced false positive and enhanced security.
- Designed and developed a POS device for notification purposes post-payment transactions via QR codes, integrating with digital wallets or mobile banking, resulting in a 30% increase in transaction efficiency.
- Developed an OCR-based document extraction web solution supporting multiple data types, automating data extraction through defined document templates.

Samadhan Engineering, Kathmandu, Nepal

Aug 2020 – Nov 2020

Machine Learning Intern

- Engineered an advanced road lane detection system with real-time curvature calculations and vehicle detection.
- Trained an AI model for autopilot functionality within a simulator's racetrack environments.

ACADEMIC PROJECTS

College Inquiry Chatbot

Mar 2021

- Developed a chatbot utilizing AIML and NLP techniques to address college-related inquiries.
- Implemented Wu-Palmer Similarity for accurate sentence matching between user input and responses.

PDF-based RAG Chat Assistant using Vector Storage and LLMs

July 2024

- Developed a chat assistant leveraging Retrieval-Augmented Generation (RAG) to enable users to query PDF documents by searching embedded text, using vector storage for efficient.
- Implemented embedding of PDF content and designed a retrieval system that accurately matches user queries with relevant document sections, powered by Ollama and LangChain.

LinkedIn Profile Scraping Tool using LLMs

July 2024

- Developed a Python-based tool leveraging Language Models (LLMs) to scrape and analyze LinkedIn profiles, utilizing the Proxycurl API for data extraction and integration.
- Implemented functionality to mock API responses and integrated LLMs for enhanced data interpretation, ensuring reliable and insightful results across different scenarios.

Feature Toggle Detection using LLMs

Aug 2024

- Developed a comprehensive tool leveraging Language Models to analyze code repositories for feature toggles across multiple programming languages.
- Automated the extraction and explanation of feature toggles and their implementation using Python and open-source LLMs

SKILLS

Computer: Python, Java, HTML/CSS, JavaScript, ReactJS, Flask, FastAPI, LangChain, Bootstrap, TensorFlow, PyTorch, Pandas, NumPy, Matplotlib, Scikit-learn, NLP, RoboFlow, MySQL, MongoDB, SQLite, Visual Studio Code, PyCharm, IntelliJ, Git and GitHub, Docker, Azure cloud services (Azure VMs, Azure Storage, Azure Functions, Azure Cognitive Services).

Languages: English, Nepali, and Hindi

COURSES AND CERTIFICATIONS

Full Stack Data Science Course – Become a Data Scientist (Certification from UdeMy) Jan 2022

Machine Learning (Certification from Coursera) Dec 2022

LangChain- Develop LLM powered applications with LangChain (UdeMy) July 2024

VOLUNTEER AND ORGANIZATIONAL EXPERIENCE

Event Organization & Team Lead, IIC Spring Carnival Apr 2019

- Coordinated logistics, scheduling, and team efforts to deliver successful events, showcasing leadership and organizational skills.

Project Showcase Participant, IIC Industrial Fair Oct 2021

- Effectively communicated project objectives and achievements to industry professionals and attendees, fostering meaningful connections.