

Nishant Parajuli

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EDUCATION

Islington College
BSc (Hons) Computing

Kathmandu, Nepal
Feb. 2022 – Jun. 2024

EXPERIENCE

AI Engineer

Innovate Nepal Group

Jun. 2024 - Sep. 2026

Kathmandu, Nepal

- Designed and deployed a scalable facial recognition system using computer vision with 98.5% accuracy across diverse demographics.
- Developed a real-time classroom transcription and intelligence pipeline using Nvidia Nemotron; integrated speaker diarization and sentiment analysis to auto-generate lesson summaries and measure interactivity.
- Engineered a multi-disciplinary AI teaching assistant utilizing LangChain and Contextual RAG with parent-child chunking to automate lesson planning and student curricula, driving adoption across multiple schools.
- Engineered automated assessment system leveraging NLP for real-time exam feedback, reducing grading workload while maintaining scoring consistency.
- Developed a custom Nepali Text-to-Speech system by training a VITS2 model with a Ringformer Vocoder.
- Architected a multimodal, personalized book generator using LLMs and Image Generation models, implementing a pre-generated structural skeleton framework to guarantee narrative and visual consistency.
- Orchestrated scalable AWS and GCP infrastructure to deploy containerized FastAPI microservices using Terraform, Kubernetes, Docker, and GitLab CI.

AI/Machine Learning Developer

Icebrkr

Mar. 2024 – Jun. 2024

Kathmandu, Nepal

- Optimized lightweight edge models for text classification, enhanced via rule-based approaches and Named Entity Recognition.
- Created datasets and implemented a recommendation system using word embeddings and ranking algorithms.
- Developed computer vision techniques for facial recognition on low-end devices and deployed via FastAPI.

AI Intern

InfoDevelopers Pvt Ltd.

Nov. 2023 – Feb. 2024

Kathmandu, Nepal

- Implemented Machine Learning models within Django projects, focusing on performance optimization.
- Utilized OpenCV and PyTorch for computer vision tasks, including image classification and object detection.

PROJECTS

Vendor Centric Ecommerce | *Django, Machine Learning, Python*

- Created a Django Web App for an E-commerce platform which implements vendor-centric analytics and AI features.
- Developed and integrated models for Future Sales Prediction, Inventory Management, Hybrid Recommendations, Emotion Detection for product reviews, and customer clustering.

Spoiler-Aware Webnovel Wiki | *FastAPI, React, pgvector, LLMs*

- Engineered a spoiler-gated knowledge base and agentic Q&A system for sequential reading, integrating a FastAPI backend with a custom React frontend.
- Implemented a strict database-enforced query boundary to guarantee zero future-chapter information leaks, bypassing the unreliability of LLM prompt constraints.
- Architected an automated ETL pipeline for document scraping and pgvector/HNSW dense embeddings, alongside a multi-step agentic orchestrator for hybrid retrieval and validation.
- Developed interactive UI features including dynamic entity relationship rendering, real-time spoiler-ceiling adjustments, and citation-backed Q&A.

TECHNICAL SKILLS

Languages: Python, Java, SQL (Postgres, MySQL), JavaScript, HTML/CSS

Libraries & Frameworks: PyTorch, Django, FastAPI, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, PySpark

Tools & Environments: Linux, Docker, AWS, GCP, Terraform, Kubernetes, Apache Airflow, Git, GitLab CI

Core Concepts: Data Structures & Algorithms, Machine Learning, Computer Vision, NLP, RAG Systems