

MILAN TAMANG

Kathmandu, Nepal

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PROFILE

AI Engineer with hands-on experience in machine learning, computer vision, OCR, NLP, semantic search, RAG, chatbot development, and AI model integration. Experienced in building AI-driven document processing, automation, and intelligent search systems, with additional experience in full-stack development, backend systems, databases, deployment, and technical feasibility planning for scalable software platforms.

EDUCATION

Bachelor of Science in Computer Science and Information Technology — B.Sc. CSIT

Ambition College, Kathmandu, Nepal

2021 – 2025

Higher Secondary Education, Science Stream (+2 Science)

Golden Gate International College, Kathmandu, Nepal

2018 – 2019

Secondary Education Examination — SEE

Little Garden English School, Nepal

2017

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, SQL, C, C++

Frameworks & APIs: Django, Flask, REST APIs

AI & Machine Learning: YOLOv8, LSTM, BiLSTM, SentenceTransformers, FAISS, OCR, NLP, Semantic Search, RAG

Computer Vision: OpenCV, PaddleOCR, EasyOCR, Pillow, Image Preprocessing

Frontend: HTML, CSS, JavaScript, React.js, Bootstrap, Next.js

Databases: PostgreSQL, MongoDB, MySQL

Tools: Git, Docker, VS Code, Conda, Google Colab

PROFESSIONAL EXPERIENCE

AI Engineer

Axis Software Company, Kathmandu, Nepal

August 2025 – Present

- Develop AI-based systems for invoice detection, document extraction, billing verification, semantic search, chatbot development, and automation workflows.
- Build computer vision and OCR solutions using YOLOv8, OpenCV, EasyOCR, PaddleOCR, CLAHE, and image preprocessing techniques.
- Refine, fine-tune, and optimize AI and machine learning models to improve accuracy, robustness, and performance based on project requirements and evaluation results.
- Develop Flask APIs to serve AI models and provide structured outputs for backend integration.
- Built a hybrid semantic search engine using SentenceTransformers and FAISS to improve search relevance.
- Work on multilingual chatbot development supporting Nepali, Roman Nepali, and English.
- Develop React.js and Next.js interfaces for AI dashboards, extracted data, search results, and prediction outputs.
- Continuously research and evaluate new AI and machine learning techniques, models, architectures, and tools that may be applied to existing and future projects.
- Conduct ongoing research and experimentation in AI applications for smart parking systems, transportation, mobility, and related areas, including computer vision, prediction, optimization, and automation approaches.

FREELANCE & INDEPENDENT PROJECTS

KathaDigital – Full Stack Website (Freelance Client Project | Deployed) <https://www.kathadigital.com/>

- Designed and developed a complete full-stack web application for KathaDigital, including frontend and backend functionality.
- Built the frontend using Next.js, creating responsive and production-ready user interfaces.
- Developed backend functionality and implemented the application logic required for the client platform.
- Designed and integrated a PostgreSQL database for reliable storage, retrieval, and management of application data.
- Integrated the frontend, backend, and database into a complete production system.
- Configured and deployed the application to a live production server for real-world client use.
- Handle ongoing improvements, maintenance, feature development, and production updates for the deployed platform.

Travel & Tourism Platform / Trekking Website (Freelance Project | Ongoing)

- Developing a full-stack travel and tourism platform focused on trekking services and tourism-related information.
- Building modern and responsive web interfaces for trekking packages, destinations, travel information, and tourism services.
- Working on backend functionality and database-driven content management for travel and trekking information.
- Developing an AI-powered search engine to provide more relevant and context-aware results across trekking and tourism content.
- Applying semantic search techniques to improve information discovery beyond traditional keyword-based search.
- Planning and developing the integration of an AI chatbot to help users discover destinations, trekking packages, travel information, and relevant services through conversational interaction.
- Continuing the development of new features, AI integration, backend functionality, and production-ready improvements.

Ride-Sharing Platform – Research & Technical Proposal

Independent Project

- Conducted extensive feasibility research for a mid-scale ride-sharing platform targeting Kathmandu Valley.
- Prepared a technical proposal covering system architecture, development timeline, estimated cost, infrastructure requirements, deployment, and scalability.
- Analyzed core platform requirements including real-time location tracking, ride matching, backend services, databases, APIs, security, and production environments.
- Independently evaluated technical resources, operational requirements, and scaling strategies required to build and maintain the platform.

AI Intern

Axis Software Company, Kathmandu, Nepal

January 2025 – April 2025

- Learned the fundamentals of AI system development, computer vision, OCR, NLP, semantic search, RAG, and backend integration.
- Practiced building AI workflows for document extraction, invoice detection, chatbot systems, and automation projects.
- Gained hands-on experience with YOLOv8, OCR tools, SentenceTransformers, FAISS, Flask APIs, and Django-based AI applications.

ACADEMIC PROJECTS

Predictive Water Level System

Major Project

- Developed a water level forecasting system using LSTM and BiLSTM models.

- Built a Django-based web application with a real-time dashboard for monitoring and prediction.
- Used PostgreSQL for data storage and TensorFlow for model development.

Technologies: Django, TensorFlow, PostgreSQL, Python, Machine Learning

Stock Price Prediction System

Research Project

- Developed an interactive interface for stock price prediction and financial forecasting.
- Investigated **Temporal Fusion Transformers** to explore improved forecasting accuracy.
- Evaluated model performance using MSE, MAE, and RZ metrics.

Technologies: Python, TensorFlow, Machine Learning, Data Visualization

Restaurant Management Website

Minor Project

- Built a full-stack restaurant management system with authentication, an admin panel, and email functionality.
- Developed backend features using Django and PostgreSQL.
- Created responsive frontend pages using Bootstrap.

Technologies: Django, PostgreSQL, Bootstrap, HTML, CSS

RESEARCH INTERESTS

- Artificial Intelligence and Machine Learning
- Computer Vision and OCR
- NLP, RAG, and Semantic Search
- Agentic AI and Intelligent Automation
- AI for Transportation and Smart Systems

ACHIEVEMENTS

- Secured Third Position in a College-Level Hackathon.
- Completed multiple applied AI projects involving computer vision, OCR, semantic search, chatbot development, and automation.
- Built practical AI systems integrating machine learning models with backend APIs and frontend dashboards.