Biraj Buddhacharya

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Professional Summary

Machine Learning and Web Developer specialized in machine learning with additional expertise in web development. Currently interested in backend development. Proficient in Python-based frameworks such as Flask and FastAPI, and JavaScript-based frameworks including Express, Next.js, and React. Experienced with machine learning technologies such as Langchain, Hugging Face Transformers, TensorFlow, and PyTorch.

Professional Experience

Full Stack Developer, DalloTech – Saddobato June 2025 – Present

- Developed frontend applications using **Next.js**, focusing on performance, modular components, and responsive UI.
- Built scalable backend services using **NestJS**, implementing REST APIs, authentication, and business logic.
- Contributed to the development of a full-scale **ERP system for Jeevan Vigyan**, including:
  - Content Management System (CMS)
  - Finance Management System
  - Booking Management System
  - Interactive admin dashboard for operational insights
- Worked on **Tathyanaka**, an advanced analytics and finance-focused product, including:
  - Development of an **Insurance Analysis System** for data-driven decision-making
  - Building an interactive chatbot that converts raw data into actionable insights using dynamic charts and visualizations
- Core research and development member of the **Tathyanaka AI development team**, contributing to system design, analytics logic, and AI-driven features.

Data Science Intern, MindRisers Technologies – Kathmandu April 2025 – Present

- Researched chatbots and their implementation, focusing on intent recognition and response generation.
- Investigated recommendation systems, exploring various types including content-based and collaborative filtering.
- Performed Named Entity Recognition (NER) on a corpus of data to extract key entities.
- Successfully developed a text categorization model for automated content classification.
- Researched acoustic technology in deep learning, creating a sound classification model.
- Built multiple web scrapers for various projects using BeautifulSoup, Selenium, and Scrapy.

Education

Bsc. IT (Hons) — Techspire College, Asia Pacific University 2024 – Expected 2027
+2 Science — National School of Sciences, Lainchaur, Kathmandu 2022 – 2024

Projects

Eventify (Client Freelance Work)
GitHub: github.com/birajbuddhacharya/eventify
Website: rotracteventify.vercel.app
Technologies: Next.js, Flask, TailwindCSS, shadcn/ui, Framer Motion, Khalti API, Langchain, FAISS, Google Gemini API
– Developed a full-stack event management system featuring a RAG-based chatbot using Langchain and FAISS vector database to retrieve relevant information based on prompts, with Google Gemini API for polished information display.
– Implemented content-based filtering by taking up to four recently viewed events, averaging their token vectors, and performing similarity searches for event recommendations.
– Integrated online ticketing with Khalti payment gateway and designed an admin dashboard with Framer Motion animations.

Bajra Pala (Client Freelance Work)
GitHub: github.com/EshaBuddhacharya/bajra-pala
Technologies: MongoDB, Express, React, Node.js, Radix UI
– Created an online food ordering system with cart and order tracking features.
– Built an admin panel for managing orders, menu items, feast orders, and viewing feedback, along with a dashboard displaying sales and revenue data.
– Utilized MongoDB for data storage and Express.js for a RESTful API backend.

RiskVision
Technologies: Flask, Streamlit, Scikit-learn, Docker
– Developed an application to predict probabilities of diseases such as stroke, heart disease, and diabetes based on user questionnaires.
– Used Flask for the backend with plain HTML/CSS for the frontend, and Streamlit for sophisticated model performance analysis and comparison across different models.

BreedVision
Technologies: TensorFlow, ResNet50, YOLO, Google Image Search API
– Built a deep learning model to identify dog breeds using transfer learning with a pretrained ResNet50 architecture, integrated with YOLO for image localization.
– Scraped and labeled dog images using Google Image Search API for training data.
– Froze all layers except the last two, modified the final layer to match the number of breeds, and applied softmax for prediction.

Technical Skills

- **Languages**: JavaScript (ES6+), Python, SQL
- **Frontend**: React.js, Next.js, TailwindCSS, Radix UI, shadcn/ui
- **Backend**: Flask, FastAPI, Express.js, Node.js
- **Database**: MongoDB, Mysql
- **Machine Learning**: Scikit-learn, TensorFlow, PyTorch, Langchain, Hugging Face Transformers
- **Tools**: Git, GitHub, BeautifulSoup, Selenium, Scrapy
- **Others**: Framer Motion, Khalti API, FAISS, Google Gemini API

Certifications

- **Data Science Training**, MindRisers Technologies, Putalisadak