

Sijan Paudel

✉ pas078bct037@wrc.edu.np | 📞 +977-9846906893
🐙 github.com/sijanpaul14 | 🌐 linkedin.com/in/sijanpaul14

Skills

Languages: C/C++, Python, JavaScript, TypeScript, SQL

Deep Learning: CNN, YOLOv8, Transfer Learning

NLP: Transformers, BERT, Topic Modeling, Text Classification

Data Structures & Algorithms: Arrays, Linked Lists, Stacks, Queues, Trees, Graphs, Sorting, Searching, Recursion, Dynamic Programming, Greedy Algorithms, Graph Algorithms

Technologies & Tools: React, Next.js, Node.js, Express, MongoDB, PostgreSQL, Firebase, Tailwind CSS, Docker, Git, GitHub, Vercel, Pandas, OpenCV, LangGraph, n8n.io, Streamlit, OpenCV, PyTorch, TensorFlow, HuggingFace, Scikit-learn

Work Experience

Tutor, Pokhara, Nepal

Oct 2020 – April 2023

Computer Science Tutor (Grade 8–12) – Part-time

- Designed and delivered complete computer science courses for high school students, focusing on programming, algorithms, and problem-solving.
- Fostered student interest in technology through real-world examples and project-based learning.
- Provided individual mentorship to students preparing for board exams and competitive programming contests.
- C, Python, HTML/CSS, JavaScript, Algorithms, Data Structures, Teaching

Computer Operator, Pokhara, Nepal

Oct 2022 – Jan 2024

Computer Operator

- Ensured smooth daily operation of computer systems including data entry, file management, and print services.
- Monitored systems and resolved hardware/software issues to minimize downtime and maintain data integrity.
- Assisted staff with technical troubleshooting and improved workflow efficiency through automation tools.
- Microsoft Office Suite, Windows OS, Troubleshooting, Data Management, Printing Systems

Microsoft Learn Student Ambassador

Jan 2024 – Present

Beta Tier

- Represented Microsoft in the student community by organizing and delivering tech workshops and webinars on cloud computing, AI, and web development.
- Mentored peers on using Microsoft tools like Azure, GitHub, and VS Code for academic and personal projects.
- Collaborated with fellow ambassadors globally and participated in training sessions and exclusive Microsoft events.
- Skills: Leadership, Public Speaking, Azure, GitHub, Community Engagement

Education

Paschimanchal Campus, IOE, Tribhuvan University, Pokhara, Nepal

May 2022 – Present

Bachelor of Computer Engineering

Current Aggregate: 82%

Relevant Coursework: Object Oriented Programming, Data Structures and Algorithms, Theory of Computation, Digital Logic, Probability and Statistics, Microcontroller, Microprocessor, Discrete Structure, Computer Organization and Architecture, Software Engineering, Artificial Intelligence, Operating System, Database Management System, Computer Networks and Security, Distributed System

Project Work

- **Cauliflower Disease Detection:** Built a YOLOv8-based model to detect diseases in cauliflower leaves using a custom-labeled dataset of 1,200 images. Faced issues like low-resolution photos and class imbalance, solved using image augmentation and stratified sampling. Achieved 30% mAP@0.5 accuracy in disease detection. Integrated with a mobile app with multilingual and voice support. Learned end-to-end deployment and image preprocessing. Python, OpenCV, YOLOv8.
- **Speech Emotion Recognition:** Trained a voice-based emotion classifier using the RAVDESS dataset. Applied MFCC feature extraction and used CNN and SVM models. Challenges included noisy samples and emotion overlap; handled via normalization and dropout. Achieved 60% accuracy and 65% F1 score across 6 emotion classes. Learned audio feature engineering and model tuning. Python, TensorFlow.
- **Movie Genre Classification:** Designed a multi-label classification model using the CMU Movie Summary Corpus. Applied TF-IDF with logistic regression and later BERT for fine-tuning. Faced issues with overlapping genres and class imbalance. Final BERT model achieved 60% micro-averaged F1 score. Learned advanced text embeddings and transfer learning. Python, HuggingFace Transformers, PyTorch.
- **Spam SMS Detection:** Developed a spam classifier using the SMS Spam Collection Dataset. Cleaned and preprocessed short, noisy messages using stemming and token filtering. Applied Naive Bayes and SVM, achieving 70% accuracy and 75% precision. Learned classical NLP with real-world data constraints. Python, NLTK, Scikit-learn.
- **Customer Churn Prediction:** Built a predictive model using the Telco Churn Dataset to identify at-risk customers. Handled missing data and class imbalance using imputation and SMOTE. Used logistic regression and XGBoost, achieving 68% accuracy and 66% recall. Learned to align models with business KPIs like churn reduction. Python, Pandas, XGBoost.
- **Credit Card Fraud Detection:** Built an anomaly detection model using the Kaggle credit card dataset. Addressed extreme imbalance (0.17% fraud) using undersampling and isolation forest. Achieved 73% AUC-ROC and 65% precision on fraud cases. Learned cost-sensitive learning and real-time fraud detection strategies. Python, Scikit-learn, Matplotlib.
- **English-to-Nepali Sentence Translator:** Developed a rule-based machine translation system using a self-created bilingual corpus of 500+ sentence pairs. Challenges included language structure mismatch and lack of dataset. System achieved 50% BLEU score on basic sentences. Learned syntax rules and alignment-based translation basics. Python, NLTK.
- **NER Tagger for English News Articles:** Created an entity recognition model using CoNLL-2003 dataset. Faced challenges with nested entities and token ambiguity. Applied BiLSTM-CRF, achieving 65% F1 score on named entity types (PER, LOC, ORG). Learned sequence labeling and model evaluation techniques. Python, SpaCy, Scikit-learn.

Awards and Certificates

- **Applied Data Science Lab** – WorldQuant University, Dec 2023
- **AI Ethics, AI Fundamentals, Generative AI Concepts** – DataCamp, Nov 2023
- **Large Language Models (LLMs) Concepts** – DataCamp, Nov 2023
- **Introduction to ChatGPT, Understanding Artificial Intelligence, Understanding Machine Learning** – DataCamp, Nov 2023
- **Introduction to Data Visualization with Matplotlib** – DataCamp, Nov 2023
- **Supervised Machine Learning: Regression and Classification** – Coursera, Nov 2023
- **Python for Machine Learning, Python Fundamentals for Beginners** – Great Learning, Nov 2023
- **Intro to Machine Learning, Pandas** – Kaggle, Nov 2023