Santosh Sapkota

⚲ Kathmandu, Nepal   📞 +977-9840366922   ✉ santoshsapkota588@gmail.com   🌐 Website   in LinkedIn

GitHub

ABOUT ME

Certified Computer Engineer passionate about Data Science and Machine Learning. Apart from tech, I enjoy strategic chess, riddles, and creative hobbies like photography and video editing.

EDUCATION

Cosmos College of Management & Technology   *Sep 2018 – Aug 2023*
Bachelor of Computer Engineering – Satdobato, Lalitpur

NIC Secondary School, HSEB (Now NEB)   *Jul 2016 – Jun 2018*
+2 Science – Dillibazaar, Kathmandu

PROJECTS

○ **IDC Breast Cancer Detection (CNN) [link]** – Built a custom Convolutional Neural Network using TensorFlow to classify histopathological *image* data into benign or malignant IDC classes. Used Grad-CAM for interpretability. Wrote a paper discussing methodology and findings.

○ **IDRiD Diabetic Retinopathy Lesion Detection [link]** - Applied YOLOv8 to detect localize retinal microaneurysms, hemorrhages, and exudates from annotated fundus images.

○ **Breast Cancer Prediction [link]** – Developed and evaluated neural network models on UCI diagnostic *tabular* data to classify tumors as benign or malignant.

○ **Medical Appointment No-Show Prediction [link]** – Analyzed appointment and demographic data to predict the likelihood of patients missing appointments. Performed EDA and trained classification models for behavioral pattern recognition.

○ **Intelligent Diet Planner [link]** – Website built using Django framework and ML algorithm to provide meal options tailored to user requirements.

○ **Laptop Price Prediction [link]** – Predicted laptop prices using features like RAM, GPU, manufacturer, storage, and more.

○ **Book Detail Scraping [link]** – Scraped book metadata (titles, authors, ratings) from websites using Python and BeautifulSoup. Cleaned and analyzed data for trends.

○ **Photography Gallery Website [link]** – Created personal photography portfolio in Django, hosted on Render with Cloudinary for image storage and responsive UI.

○ **AI-Built Personal Portfolio Website [link]** – Portfolio designed and built entirely using AI tools. Hosted on GitHub Pages with a clean UI and integrated project showcase.

EXPERIENCE

Teaching Assistant
Shree Janapriya Secondary School, Baglung   *Aug 2023 – Nov 2023*

○ Taught Science & Mathematics to secondary students.

○ Designed lesson plans and simplified complex concepts for better understanding.

PUBLICATIONS

Sapkota, Santosh. (2025). *Breast Cancer Diagnosis Using Custom CNN and Grad-CAM: An Interpretable Deep Learning Approach on Histopathology Images.* Zenodo. https://doi.org/10.5281/zenodo.16900046

TECHNICAL SKILLS

Programming Languages: Python, HTML/CSS, SQL

Libraries & Frameworks: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Keras, TensorFlow, OpenCV, NLTK

Machine Learning: Supervised Learning, Deep Learning, CNN & RNN, ResNet, Transfer Learning, YOLO, NLP, Boosting (XGBoost, CatBoost, AdaBoost), Bagging (Random Forest)

Data Science: Data Cleaning, Preprocessing, EDA, Visualization

Web Development: Django, BeautifulSoup, GitHub Pages, Cloudinary, Render

Tools: Git, GitHub, Jupyter, Colab, Kaggle, ChatGPT, LaTeX, Zotero

Mathematics: Linear Algebra, Probability, Statistics, Calculus

OTHER SKILLS

- **Languages:** English (fluent), Nepali (native), Hindi (fluent)
- **Work Style:** Flexible, collaborative or independent
- **Curiosity:** Deep interest in science, behavior, and self-guided research
- **Technical Writing:** Writes blogs on Medium about ML projects and AI tools