NIRAJAN BEKOJU

Computer Engineering Student

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TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, Julia, Matlab
- **Data Analysis and Visualization:** numpy, pandas, matplotlib, seaborn, plotly, cufflinks
- **Machine Learning and Deep Learning:** scikit-learn, Tensorflow, Keras, Pytorch, Tensorboard
- Computer Vision **(OpenCV Python)** and NLP
- **Cloud Computing:** AWS
- **Web Designing:** HTML, CSS, Bootstrap, React JS, three JS
- **Backend:** Flask, Django and Django Rest Framework
- **Version Control:** Git, Github, Gitlab, Bitbucket
- **Database:** Postgresql, MySQL
- OOP, SOLID, Design Pattern
- Data Structures and Algorithms

ACHIEVEMENTS

- Winner, Hitachi Technergy Hackathon - Locus 2024
- First Place, LLM Category, AI Competition, KU IT Meet 2023
- Winner, Data Insights Category, Docsumo Dataverse 2023
- First Position, Khwopa Manual Akhada Competition 2018

EDUCATION

Bachelor in Computer Engineering
Pulchowk Engineering Campus

- Nov 2019 – April 2024   Pulchowk, Lalitpur

Microdegree, Artificial Intelligence
Fuse Machines

- Jan 2023 – Jan 2024

CERTIFICATIONS

- Machine Learning by Stanford University on Coursera
- Neural Networks and Deep Learning by DeepLearning.AI
- Convolutional Neural Networks on Coursera
- NLP Specialization by DeepLearning.AI
- AWS Academy Graduate - AWS Academy Cloud Architecting
- Bayesian Statistics : From Concept to Data Analysis by University of California, Santa Cruz on Coursera

WORK EXPERIENCE

Freelance - Nepali Sign Language Recognition

- Implemented Spatial-Temporal Transformer Encoder and Standard Transformer Decoder for **Sign Language Recognition**
- Achieved 60% Word Error Rate in the test dataset.
- **Technologies Used:** Pytorch, Tensorboard, Mediapipe, Transformer

Freelance - Staff Management System

- Managed the staff during lockdown period.
- Implemented attendance | salary | notifications | notice management
- **Technologies Used:** Django, Django Rest Framework, React

PROJECTS

Transformer Based Model for Nepali Language Generation and Spelling Correction

- Achieved 110 perplexity on test data of Oscar Nepali Corpus
- Implemented Noisy Channel Model for Spelling correction
- Deployed on Hugging Face

Energy and Price Forecasting - Hitachi

- Analyzed and Visualized the time series data of energy, weather and price
- Experiments with RandomForestRegressor, SARIMA, TFT
- **Result:** Achieved 1.651% Mean absolute percentage error

Wine Quality Classification

- Study of various physio chemical properties of wine to classify their quality | Handle imbalanced datasets | Machine learning experiments

Topic Classification | Dataverse 2023

- Developed Arxiv Topic Classifier model and paper recommendation system

Fourier Transform Drawing

- Draw any 2D closed diagrams using DFT and to understand discrete fourier transform
- **Technologies Used:** OpenCV-Python3 for Image Processing to generate image coordinates and C++, SFML Library for graphics.