

Srija Uprety

Machine Learning
Computer Vision
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EDUCATION

Trinity International College Computer Science and Information Technology	Kathmandu, Nepal 2018 – 2023
The Times International College Physical Science	Kathmandu, Nepal 2015 – 2017
Paragon Public School	Kathmandu, Nepal 2015

EXPERIENCE

Bottle Technology Machine Learning Engineer	Jhamsikhel, Lalitpur 2022-2023 (8 months)
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- Used yolov7 for object detection and implemented it on Jetson Nano.
- Performed Line segmentation for detecting license plate characters using Horizontal Projection Profile.
- Implemented image preprocessing techniques like otsu binarization, Niblack algorithm, Morphological processing.
- Deployed applications on Docker.

Fusemachines AI Fellowship Microdegree	Kathmandu, Nepal 2022 – 2023
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I was selected as one of the 100 participants from a pool of thousands of applicants to join a prestigious year-long AI fellowship program. This program focused on providing comprehensive training and education in cutting-edge AI technologies such as Machine Learning, Deep Learning, and Computer Vision.

- Machine Learning
- Deep Learning
- Computer Vision

SKILLS

Python
Machine Learning
Deep Learning
Computer Vision
Docker

REFERENCES

Sushant Chalise
TA at Pulchowk Campus
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Abhishek Dewan
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RESEARCH

Evaluation of hybrid models to estimate forecasting accuracy of daily global solar radiation: A case study of parbat, Nepal

- This research aims to contribute to the understanding and application of solar energy forecasting. The findings have the potential to inform decision-making processes related to solar energy utilization, particularly in regions like Nepal, where harnessing solar energy effectively can play a significant role in meeting the growing energy demands sustainably. Three stand-alone models ARIMA, ANN and LSTM and two hybrid models ARIMA-ANN and ARIMA-LSTM were used for daily global solar radiation forecasting.

PROJECTS

Growing Neural Cellular Automata

Tools used: Python, Tensorflow, Gradio

- A system that enables the generation of intricate structures in three dimensions, as well as simulating the development of multicellular structures starting from a single cell. The project highlights two significant contributions, namely, an expansion of Neural Cellular Automata to 3D voxels and the development of a cellular automation technique for producing voxel structures with different levels of complexity.

Time Series Analysis

Tools used: Python, Jupyter Notebook, Keras, Sklearn, TensorFlow

- The major objective of this project was to enhance the deep learning models (by hyper parameter optimization) that could potentially perform well in prediction problems like value of stocks. Models like ARIMA and LSTM was used to simulate the predictions of stocks with longitudinal data. The model accuracy was achieved by fine-tuning parameters such as order (p, d, q) for ARIMA and LSTM layers, units, learning rate, and batch size.

Image to text converter

Tools used: Python, Tesseract, Django

- The objective of this project was to develop a tool that enables the conversion of images into editable text. After extracting the images, techniques like thresholding and image inversion was performed to ensure that the background color was white and the foreground was black optimizing the accuracy of the OCR (Optical Character Recognition) tool, Pytesseract. Django as the backend framework was integrated for the image-to-text conversion tool. By combining these technologies, a user-friendly solution was generated for effortlessly transcribing information from images into editable text format.

Correlation between Reviews and star ratings

Tools used: Python

- The main purpose of this project was to discover if there is a correlation between reviews and star ratings for a specific product, the gaming keyboard from Amazon. By web scraping the star ratings and reviews data, we aim to determine if there is a positive or negative correlation between these two variables.

ACHIEVEMENTS

Trinity International College's Idea Hunt

1st Position - Team "Khutruke"

- Secured 1st position in Trinity International College's Idea Hunt competition, competing as part of the dynamic team "Khutruke." Our innovative idea was recognized for its potential and impact by the esteemed panel of judges, Rajib Subba, PhD, and Bhoj Raj Ghimire, PhD.