Nishan Sangeeth

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"A self-motivated individual equipped with strong fundamental knowledge and passionate in solving real world problems with open-source cutting-edge research contributions in Deep Learning, Computer Vision and Machine Learning."

EXPERIENCE

Freelancing-upwork — **USA**
AI/ML Engineer — *Des 2023 – Present*

- A RAG (Retrieval Augmented Generation) Chat Bot for the gcore.com website was implemented, which is a knowledge-based bot capable of asking questions related to the website. The OpenAI API was utilized as an embedding model, and responses were obtained using Flask API.
- Workflows for vid2vid, txt2img, and txt2vid were developed using ComfyUI.
- Experience was gained in working and experimenting with SDXL Lightning, SD1.5, and SDXS-512.
- Depth image, edge detection, and skeleton detection were worked on using Hugging Face and Civitai models.
- Experience was gained with Lidar depth maps and the NTU RGBD Dataset, and testing and predictions were conducted using MediaPipe and MoveNet.
- Collaboration with team members was facilitated using version control systems such as Jira and Git for organizing modifications and assigning tasks.

Aizenit (Pvt) Ltd — **London, England, United Kingdom**
Intern AI/ML Engineer — *Nov 2023 – Jan 2024*

- The development of the document RAG (Retrieval Augmented Generation) model base project was undertaken, incorporating cutting-edge technologies like vector databases such as Faiss and ChromaDB. Advanced embedding techniques like Llama2 were employed to enhance document representation, and prompt engineering methodologies were implemented to automate the generation and formatting of documents.
- Experience was gained with huggingface references and working with pre-trained models, as well as handling ONNX, BERT, YOLOv8, Transformers, and Flask API.
- Expertise was developed in ultralattics object segmentation and detection in production, along with creating and working with table detection AI models.
- Collaboration with team members was facilitated using version control systems such as Git to organize modifications and assign tasks.

Entgra (Pvt) Ltd — **Dehiwala, Sri Lanka**
Software Engineer Intern — *Feb 2023 – Aug 2023*

- Assisted in development of the front end and back end of a web application for Java and JavaScript using React and the Spring Boot framework.
- Implemented the Ant Design framework for the front-end, enhancing user interface design and user experience.
- Developed RESTful APIs using IntelliJ IDEA in conjunction with Java and Spring Boot, creating endpoints for HTTP operations and providing a seamless interface for data interaction. Utilized Postman for API testing and validation.
- Expertise in metadata handling, allowing users to view and manipulate data with precision.
- Demonstrated proficiency with Android Studio for thorough testing of mobile applications, ensuring compatibility and performance optimization.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.

EDUCATION

Wrexham Glyndwr University — **Wrexham, United Kingdom**
Bachelor of Computing — *Feb. 2023 – Jun. 2024*

Institute of Technology University of Moratuwa | ITUM — **Diyagama, Sri Lanka**
Information Technology Diplomate — *Feb. 2020 – Feb. 2023*

MO/Koularagama National School — **Sewanagala, Sri Lanka**
GCE Advanced Level Examination — *Feb. 2015 – Des. 2018*

PROJECTS

Diagnosis Of Heart Patients Using Deep Neural Network | **July 2021**
Group - 03 [Python, React, CNN, Pandas, Keras, Tensorflow, Numpy, Matplotlib, OpenCV, Fast API, Firebase]

- Created web applications using CNN, python, fast API, and React to predict whether a person has a heart disease.
- Processed user-inputted information in the back-end of the app to return a subtotal prediction based on the ECG Image input.
- Utilized a comprehensive ECG image dataset to perform data preprocessing. Employed Pandas and OpenCV to efficiently manipulate the data, which included converting the images to grayscale, resizing them, and subsequently saving the processed data as NumPy arrays. Successfully extracted both data and target values.
- Designed aand implemented a sophisticated neural network model, incorporating essential components such as sigmoid activation functions, utilizing dense and flatten layers. I seamlessly integrated the trained model into a Python-based FastAPI backend. My contributions showcase proficiency in deep learning, model architecture design, and full-stack development.

Face-mask-classification | *Python, keras, Tensorflow* **Aug 2023**

- During the COVID-19 pandemic, I spearheaded a Face-mask Classification project utilizing Convolutional Neural Networks (CNNs). This initiative aimed to swiftly and accurately identify mask-wearing individuals. And created a model Achieving over 90% accuracy

Face-mask-classification-using-TransferLearning | *Python, CNN, MobileNetV2* **Sep 2023**

- Designed a Convolutional Neural Networks (CNNs) model to swiftly and accurately identify mask-wearing individuals. Employing transfer learning with the MobileNetV2 model, the model had emarkable accuracy, surpassing 90%

Stock-market-value-prediction-LSTM | *Python, RNN-LSTM* **Aug 2023**

- Pioneered the development of a cutting-edge Stock Market Value Prediction model by leveraging RNN-LSTM architecture with Python. This initiative aimed to forecast future market opening values, empowering strategic decision-making with actionable insights.

Question-and-Answering-system | *Python, BERT* **Aug 2023**

- Implemented a state-of-the-art BERT Transformer model to enhance a Question and Answer database by automating answer generation. Trained the model to provide accurate responses to user queries.

Face-classification | *Python, Deep-Face, VGG-Face, OpenCV* **Sep 2023**

- Utilizes cutting-edge Deep Learning techniques for facial classification using deep face. VGG-Face model Provides an easy-to-use interface for users to classify individuals in images. Deployed for real-time classification and continuously improved for better results.

Fake-News-Classification | *Python, Word2Vec, nltk, PorterStemmer* **Aug 2023**

- This project aims to build a Fake News Classification System using LSTM and one-hot encoding. We preprocess the data with NLTK by removing stopwords and applying Porter stemming. The model achieves a strong 91% accuracy in distinguishing between fake and genuine news.

INTERESTS

Artificial Intelligence | **Deep Learning** | **Machine Learning** | **Computer Vision** | **Data Science** | **Software Engineering** | **Robotics** | **Internet of Things** | **Mathematics**

SKILLS

Languages: Python, Java, HTML/CSS, JavaScript, SQL
Artificial Intelligence: Machine Learning, Deep Learning, Data Science
Developer Tools: Anaconda Navigator, Jupyter Notebook, Spyder, Orange 3, VS Code, Postman, NetBeans, IntelliJ IDE, Adobe Photoshop, Google Cloud Platform
Technologies/Frameworks: Linux/Ubuntu, TensorFlow, Keras, PyTorch, FastAPI, Spring Boot, React, Firebase, GitHub
Languages: Sinhala, English
Soft Skills: Problem-solving, Teamwork, Leadership, Adaptability, Fast learning ability, Collaboration, Flexibility

CERTIFICATES

Introduction to Neural Network and Deep learning | **Sep 2022**
Offered by Great Learning

Python for Beginners | **Oct 2022**
Offered by Open Learning Platform - University of Moratuwa

Scrum foundation professional | **Nov 2022**
Offered by SFPC

SOCIETIES

Computer society (ITUM)

Gavel club of ITUM

Rotaract club of UOM

Robotics club of ITUM