SUPUN LAKSHAN

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PROFILE SUMMARY

Dedicated AI Engineer with experience in developing and deploying machine learning and deep learning models. Skilled in leveraging AI to solve complex problems and improve business outcomes. Proficient in AI frameworks, model optimization, and collaborative development. Eager to contribute to innovative AI projects and drive success within a dynamic team environment.

TECHNICAL SKILLS

- **Programming Languages:** Python, C++, SQL, HTML/CSS
- **Artificial Intelligence:** Machine Learning, Deep Learning, Natural Language Processing, Computer vision, Generative AI & LLMs (including LLaMA 2, Falcon LLM), Data Science
- **Core AI Concepts:** Neural Network Architectures, Algorithm Optimization, Statistical Analysis, Data Structures and Algorithms, Model Evaluation and Validation
- **Technologies & Frameworks:** TensorFlow, Keras, PyTorch, scikit-learn, Langchain, OpenCV, PySpark, CNN, RNN, Transformer Networks, Transfer learning
- **MLOps & Deployment:** MLflow, Kubeflow, Docker, AWS, CI/CD, FastAPI, Flask, AWS SageMaker
- **Tools & Platforms:** Linux/Ubuntu, Git & GitHub, Jira, Streamlit, Faiss, Pinecone

PROFESSIONAL EXPERIENCE

Freelancing-Upwork — **USA**
AI & ML Engineer — *2023-PRESENT*

- Implemented a Retrieval Augmented Generation (RAG) Chat Bot for the gcore.com platform, designed to engage users with knowledge-based interactions pertaining to the website. Leveraged the OpenAI API for embedding purposes and facilitated responses through Flask API integration.
- Developed and optimized workflows for vid2vid, txt2img, and txt2vid using ComfyUI, streamlining content generation processes.
- Led team collaboration efforts using Jira and Git, improving project management and version control.

Brilliant Data — **COLOMBO**
AI & ML Engineer - Intern — *Dec 2023 - May 2024*

- Developed and deployed advanced computer vision projects using YOLOv8, YOLOv10, Faster R-CNN, ByteTrack, and Deep SORT for high-precision object detection, multi-object tracking, and counting.
- Implemented real-time monitoring and distance calculation systems, leveraging OpenCV and TensorFlow, enhancing surveillance and data analysis capabilities.
- Applied advanced computer vision techniques, including image segmentation, feature extraction, and object counting, to create robust and reliable monitoring solutions.
- Streamlined workflows and coordinated team efforts using Agile methodologies, version control (Git), and continuous integration/continuous deployment (CI/CD) practices.

ACADEMIC QUALIFICATION

Wrexham Glyndwr University — **United Kingdom**
Bachelor of Science in Computing — *2024-PRESENT*

University of Moratuwa (ITUM) — **Sri Lanka**
Information Technology — *2020-PRESENT*

Dharmadutha National School — **Badulla, Sri Lanka**
Passed the GCE Advanced Level Examination (Maths Stream) — *Feb. 2014 – Dec. 2016*

PROJECT EXPERIENCE

End-to-End-Medical-Chatbot-Using-Llama2 - ***Python, Generative AI, Llama2, Langchain , Pinecone, sentence-transformers, Flask, AWS*** **April 2024**

- Developed a sophisticated medical chatbot using Python, Llama2, Langchain, Pinecone, and AWS, providing accurate medical advice and information.
- Enhanced user interaction and data management with advanced NLP capabilities, leveraging Flask for the web framework and AWS for scalable deployment.

Automated-MCQ-Generator - ***Generative AI, Python, Langchain, OpenAI API, AWS*** **April 2024**

- Created an automated system to generate multiple-choice questions from PDFs using Python and OpenAI API.
- Enhanced educational content generation efficiency by 40% with deployment on AWS and Streamlit integration.

End-to-End-Chest-Cancer-Classification-using-MLflow-DVC - ***Python, TensorFlow, Keras, MLflow, VGG16, Docker, AWS, DVC, CI/CD Pipeline, Flask, HTML*** **Mar 2024**

- Developed a robust solution for classifying chest cancer cases with 92% accuracy.
- Utilized MLflow for experiment tracking, Docker for containerization, and deployed on AWS with Flask web app integration.

DocGem-Multi-Document Conversational AI Assistant - ***Generative Ai, Langchain, Faiss*** **Feb 2024**

- Created a conversational AI capable of synthesizing information from multiple documents using a Faiss database and Streamlit integration.
- Enhanced user interaction with dynamic and contextually rich conversations.

Fake-News-Classification-Using-RNN - ***Tensorflow, keras, LSTM, nltk, One Hot Encoding*** **Jun 2024**

- Built a system to classify fake news with 91% accuracy using LSTM and one-hot encoding.
- Processed and analyzed textual data to effectively differentiate between fake and genuine news articles.

Face-mask-classification-using-TransferLearning - ***Python, TensorFlow, CNN, MobileNetV2*** **Jan 2024**

- Designed a CNN model using MobileNetV2 to detect mask-wearing individuals with over 90% accuracy.
- Employed transfer learning to enhance the model's performance in identifying face masks in images.

Email-SMS-spam-classifier-NLP - ***Python, scikit-learn, Word2Vec, nltk, PorterStemmer*** **Dec 2023**

- Developed a classifier to identify spam messages using advanced NLP techniques.
- Utilized feature engineering and text preprocessing methods to enhance model performance.

CCTV-Human-Detection-Using-YOLOv8n - ***Python, Computer Vision, YOLOv8n, CNN*** **Dec 2023**

- Implemented a computer vision solution to detect humans in CCTV footage using YOLOv8n.
- Trained and optimized the model with extensive CCTV image datasets for accurate human detection.

Heart-risk-level-prediction-Using-FFNN - ***Python, keras, TensorFlow, FFNN*** **Sep 2023**

- Built a model to predict heart risk levels, providing valuable insights for proactive healthcare.
- Utilized machine learning algorithms and relevant health data for accurate risk assessment.

STRENGTHS

Strong analytical and problem-solving skills — Teamwork — Leadership — Adaptability — Fast learning ability — Collaboration — Self-motivated learner — Excellent communication skills

INTERESTS

Artificial Intelligence — Machine Learning — Deep Learning — Generative AI — NLP — Computer Vision — Data Science — Software Engineering — Robotics — Internet of Things — Mathematics

EXTRA ACTIVITIES

Member,Computer society (ITUM)

Member,Gavel club of ITUM

Member,Rotaract club of UOM)

Member,Robotics club of ITUM

REFERENCES

Available upon request