Rijo S Lal

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Skills

Languages: Python, SQL, C/C++, JavaScript

Technologies & Tools: TensorFlow, Keras, Scikit-learn, Pandas, Numpy, Matplotlib, Seaborn, FastAPI, Django, Kubeflow, Version Control(Git/Github), DVC, Hugging Face Transformers, Streamlit, Yolo, OpenCV, AWS, EC2, Docker.

Work Experience

Brototype, Trivandrum Jun 2024 - Present

Machine Learning Developer Intern

- Built a web app to summarize YouTube videos and analyze comment sentiment, offering viewer insights.
- Developed a deepfake detection web app to identify manipulated images.
- Created a stock price prediction web app using ML to provide investment insights.
- Developed a Django web app to generate highly secure passwords.
- Technologies: TensorFlow, Keras, Scikit-learn, Pandas, Numpy, Matplotlib, Seaborn, FastAPI, Django, PostgreSQL, Git, DVC, Hugging Face Transformers, Streamlit, OpenCV, HTML, CSS, JavaScript.

Education

Coursera Aug 2023 – Mar 2024

Machine Learning Specialization, Deep Learning Specialization

Relevant Coursework: Supervised and unsupervised learning, neural networks, advanced algorithms, Deep Neural Networks, CNNs for image recognition, Neural Style Transfer, RNNs for NLP, HuggingFace Transformers (NER QA), TensorFlow optimization, advanced algorithms, and model evaluation.

Arumanoor Trivandrum Aug 2022 – Mar 2024

Plus 2 (12th Grade) in Computer Science ***Percentage: 97***

Relevant Coursework: Object-Oriented Programming, Databases, Discrete Maths, Operating Systems, Computer Networks.

Project Work

- **Quizzy (2025):** Developed an AI-driven virtual interviewer that evaluates technical communication skills and emotional responses (confidence, tension, nervousness) through facial expressions. Integrated RAG with Llama3-Groq-70B for AI conversations, Llama3.2-2B for data extraction, and MaxBai embeddings for ATS estimation. Used a fine-tuned MobileNet model for emotion detection and Mediapipe for posture analysis. Transformer-based models summarize candidate profiles.Built with Django, hosted on AWS, with MLflow (hosted on DagsHub) for ML training and tracking. Employed BeautifulSoup for LinkedIn job scraping, EdgeTTS for text-to-speech, Whisper for speech-to-text, and DVC for data version control.
  Technologies: Python, Django, AWS, MLflow, DagsHub, Llama3-Groq-70B, Llama3.2-2B, MaxBai, MobileNet, Hugging Face Transformers, LangChain, ChromaDB, Mediapipe, EdgeTTS, Whisper, BeautifulSoup, DVC.
- **Look (2024):** Developed an image super-resolution model to enhance satellite images across UV, IR, and normal spectrums, optimizing TensorFlow Hub ESRGAN for improved clarity and accuracy. Utilized TensorFlow and Keras for deep learning, with OpenCV and PIL for image preprocessing and enhancement.
  Technologies: TensorFlow, Keras, ESRGAN, OpenCV, PIL.
- **Mickey (2024):** Developed an ML-based web app that analyzes music to understand its emotional tone, classifying tracks into categories like happy, sad, energetic etc. The app leverages audio feature extraction and classification using machine learning models, with TensorFlow and FastAPI providing efficient back-end support and a user-friendly interface for seamless interaction.
  Technologies: Python, FastAPI, TensorFlow, Librosa, Scikit-learn, HTML, CSS, JavaScript.

Awards and Certificates

- **Mentor at Linkdin:** Guided students and working professionals in improving their ML and DL skills.
- Machine Learning Nanodegree on Udemy
- Data Structures Algorithms Nanodegree on Udemy