Gowtham Arulmozhi

+1 5412862416 — arulmozg@oregonstate.edu — linkedin.com/in/gowtham-arulmozhi — github.com/wothmag07

Experience

National Payments Corporation of India Aug 2021–Sep 2023
Associate Technical Architect *Chennai,India*

- Revamped and executed a high-performance cluster architecture featuring **Kafka**, **Redis**, **Nginx**, **Cassandra** Database, **Kafka**, **Keydb**, and **RabbitMQ** for the NETC-Fastag application. Conducted end-to-end testing in stand-alone VMs, enabling seamless handling of up to 1 billion daily transactions, with a remarkable 90% efficiency boost compared to the previous system.
- Participated in an inter-hackathon challenge, spearheading the development of a fraud detection model for the Aadhaar-enabled Payment System. Leveraged cutting-edge ML algorithms to achieve 80% accuracy rate by harnessing financial raw data.
- Implemented and fine-tuned an **EFK** monitoring solution in collaboration with the **kube prometheus stack** to oversee Block-chain application performance and system hardware metrics, ensuring optimal functionality.
- Led the Proof-of-Concept initiative for NETC-Fastag, pioneering the creation of a **YOLOv5** model to accurately recognize number plates and enhance text extraction accuracy to 90%.

Verzeo Apr 2020 – May 2020
Data Science Intern *Remote*

- Constructed a robust salary prediction model from the ground up, leveraging Artificial Neural Networks to process both numerical and categorical data supplied by the team, achieving an outstanding accuracy rate of 93.7%.
- Employed advanced regression techniques, including Gradient Boosting and Neural Networks using Keras, to analyze and predict housing prices on the House Prediction Dataset.

Technical Skills

Languages:Python, SQL,No SQL, YAML, Java, C
Frameworks: Pytorch, Flask, Tensorflow, Django, Scikit-Learn, Networkx
Tools: Git, Docker, Kubernetes, EFK Stack, Google Cloud Platform, Linux, KeyDB, Apache Kafka, Postman, Kube Prometheus Stack, RabbitMQ, MATLAB
Areas of research: Machine Learning, Natural Language Processing, Graph Learning, Computer Vision

Projects

Sentimental Analysis | *Python, NLP, Pytorch, Flask* Jan 2023

- Trained a sentiment analysis model utilizing the BERT architecture's pre-trained weights and deployed it using Flask API.
- Achieved an 93% accuracy on the IMDB Movie Reviews dataset, showcasing the model's effectiveness in sentiment classification.

Realistic Multimedia Traces | *Python, Wireshark, GAN, MS-Excel, PyTorch* Jan 2021 - Jun 2021

- Developed a generative network model using TGAN architecture to create synthetic samples of multimedia traffic traces in the PyTorch framework.
- Conducted a comprehensive statistical analysis comparing the model's results with actual data values, providing valuable insights into its impact on network traffic.

Arrhythmia Detection [link] | *Arduino,Python,Signal Processing, Tensorflow,Deep Learning* Jun 2019 - Dec 2020

- Engineered a deep CNN model to accurately detect arrhythmia using the imbalanced MIT-BIH dataset, achieving an outstanding accuracy of 95.7%
- Integrated real-time ECG signal extraction for testing purposes using Arduino UNO, ECG sensors and Raspberry Pi, enhancing the model's practical applicability.

Emotion AI | *Python, Deep Learning, Image processing, Tensorflow* Nov 2020

- Developed and implemented two distinct deep learning models for categorizing people's emotions based on their facial photos and key facial points.
- Leveraged the ResNet-18 architecture and created an efficient ETL pipeline, achieving an better accuracy of 93% in emotion classification.

Education

Oregon State University Corvallis, OR
Master of Science in Artificial Intelligence *Sept 2023 – Present*

Sri Sivasubramaniya Nadar College of Engineering Chennai, IN
Bachelor of Engineering in Electronics and Communication; Cumulative GPA: 8.30 *Aug 2017–May 2021*