Sri Kailaash Kumar. S

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Software Engineer

Aspiring Computer Science Engineering Student, poised to translate a passion for learning and achieving into impactful solutions.

Education

B.Tech in Computer Engineering

Bachelor of Technology • CGPA: 7.64 •Sep 2021 - Sep 2025

Senior Secondary

The Velammal International School • GPA: 95% • Jul 2019 - Jul 2021

Skills and Interests

- Distributed Computing
- AI/ML
- Web Development
- Python
- C/C++
- SQL

Projects

Novel Leader Election Algorithm

Nov 2023 - March 2024 Overview:
- Developed a Novel Leader Election Algorithm tailored for Distributed systems
- The project aims to provide an efficient leader election mechanism that prioritizes node participation, enhancing the consensus process in the distributed system.

Key Achievements:
- Introduction of Prioritization Scheme
- Enhanced Fault tolerance
- Improved scalability

Technologies used:
- Python - Development, Implementation, and Testing of the PEQC algorithm
- Design and analysis of Algorithm - To formulate efficient leader election strategies
- Mathematical modelling - To optimize parameter tuning.

Glaucoma Detection using Deep Learning and Explainable AI (ExAI) Techniques

Dec 2023 - April 2024 Overview:

- This Study focuses on the development for automatic glaucoma detection using state-of-art deep learning technologies, specifically AlterNet-K and DenseNet along with LIME (Local Interpretable model-agnostic Explanations) ExAI model.

- By leveraging these Neural Network models, we aim to create a saleable and efficient solution capable of analysing retinal images to help in the early detection of glaucoma, enabling timely intervention and management of this sight-threatening condition.

- Along with early detection on glaucoma, LIME helps in interpreting the model's decisions.

Key Achievements:
- Development of an Automated Deep-Learning based glaucoma detection system.
- Explainablity using LIME
- Integration of Optimization Techniques
- Rigorous Evaluation and Validation
- Comparison with other existing architectures

Technologies used:
- AlterNet-K and DenseNet Architectures
- Python - Development, Implementation and Testing of our models
- Image processing Libraries
- LIME Architecture

Inter Scanner Variability

Aug 2023 - April 2024

Overview:
- Worked on the Inter-Scanner Variability project, aimed at comparing the performance of multiple Convolutional Neural Networks (CNNs) on MRI data acquired from various MRI scanners.
- The project involves training and testing CNN models using the dataset acquired from different MRI scanners to evaluate the variability in their performance.

Key Achievements:
- Comprehensive Analysis to evaluate the performance variability of CNN models
- Developed and Implemented methodologies to pre-process MRI data
- Successfully trained CNN models including AlexNet, DenseNet, and VGG from different manufacturers such as Philips and GE.

Technologies used:
- Deep Learning Frameworks - TensorFlow, Keras
- Convolutional Neural Networks
- MRI data pre-processing
- Python tools and libraries - NumPy, pandas, Matplotlib, scikit-learn

Volunteering & Leadership

Amrita Intercampus Tournament

Runners•Tamil Nadu•Nov 2023 - Nov 2023

Played as a key member of the Amrita Coimbatore's Football team during the Amrita Intercampus tournament.
Contributed to the team's success in reaching the knock-out stages of the tournament, with the least goals conceded.
Demonstrated Strong teamwork, communication, and leadership skills on and off the field.

Extracurricular Activities

- Football
- Cookin
- Photography