ASHWANTH KUPPUSAMY

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EDUCATION

Master of Engineering, Computer Science Sep. 2023 – Jun. 2025
Oregon State University Corvallis, Oregon

Bachelor of Technology, Computer Science Jul. 2019 – Jun. 2023
Amrita Vishwa Vidyapeetham Coimbatore, India
CGPA - 8.89/10

WORK EXPERIENCE

Undergraduate Student Researcher Jan. 2023 – May. 2023
Amrita Vishwa Vidyapeetham Coimbatore, India
Accelerating multi modal deep learning applications at the edge

- Wrote Linux scripts to automate the benchmarking of real time and deep learning applications
- Introduced and modified code in C make files of openVino toolkit for compatibility with legacy software.
- Designed an algorithm to distribute inference load among multiple **deep learning accelerators** based on computational weight of the involved deep learning models.
- Developed a Python function to parse XML files in Intermediate Representation (IR) for calculating computational weight of deep learning models, by analysing the number of layers and edges in the model.
- Interfaced multiple Intel neural compute sticks to raspberry pi 4 using open vino toolkit for object detection.

Software Engineering Intern Dec. 2022 – Sep. 2023
Dhyanalinga Power Solutions Coimbatore, India

- Led development of portfolio website as **scrum master** and implemented Agile Principles.
- Created **CI/CD** pipeline for deployment of node.js application increments with GitHub Actions and Netlify.
- Employed **Regression Analysis** on time-series power-equipment sales data, facilitating accurate sales forecasting and strategic planning.
- Conducted detailed **correlation analysis** to uncover relationship between client categories and seasonal demand patterns, which enabled targeted marketing, resulting in **20%** year-on-year increase in sales.
- Built employer's portfolio website and established contact pathway using API calls to a SMTP server.

RESEARCH WORK

A. K, D. N. L. K, D. Divyendh D, S. K. S, V. Kumar Sundar and P. Kumar, "Inference at the Edge for Complex Deep Learning Applications with Multiple Models and Accelerators," 2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), Delhi, India, 2023, pp. 1-7, doi: 10.1109/ICCCNT56998.2023.10306363.

SKILLS

Technical Skills: Python, C, C++, Java, JavaScript, HTML, CSS, Haskell, Scala, Data Structures, Algorithms, Firebase, SQL, MongoDB, XML, JSON
Libraries/Frameworks: React.js, Node.js, Express.js, Flutter, OpenCV, pandas, NumPy, matplotlib, Scikit-learn, Seaborn, OpenGL, GLS, Cisco packet tracer, Git.
Management: Agile methodologies, Scrum, Problem solving, Communication and Team Work

PROJECTS

Library Management System Jan. 2022 – Apr. 2022

- Managed a group of 4 people to develop library management system and acted as project scrum master.
- Created forms with react and bootstrap to execute CRUD operations on books and Library database.
- Devised a **full stack** web application using **React.js, Node.js** and **firebase** to manage library's primary functions such as keeping track of books and checkouts, as well as subscriber profiles and subscriptions.
- Achieved real time changes in frontend for database changes and integrated backend using firebase API.

Intelligent Crop Recommendation System Jul. 2021 – Nov. 2021

- Trained Decision tree, K Nearest Neighbour (KNN), Naive Bayes, SVM Classifier, Random Forest algorithms after feature engineering the soil dataset.
- Performed a comparative study on the performance of various machine learning models on test data.
- Performed predictions using the Naïve Bayes classifier and obtained accuracy of 95%.