

ASHWANTH KUPPUSAMY

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EDUCATION

Master of Science, 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

WORK EXPERIENCE

Graduate Researcher Feb. 2024 -Present
Oregon State University Corvallis, Oregon

- Fine-tuned Lang-to-Logic LLMs to convert natural language into logical specifications for real-time systems.
- Developed RAG based training method to specialize T5 in real-time systems and reduced hallucinations.
- Acquired, cleaned, and processed publicly available unstructured data to create knowledge base for LLM.

Web Developer - Volunteer Feb. 2023 – Apr. 2023
Dhyanalinga Power Solutions Coimbatore, India

- Volunteered to develop a portfolio website a local business and significantly improved their online presence.
- Collected user stories, created comprehensive SRS document, and used Jira to track progress on various tasks.
- Designed a fully responsive website optimized for various resolutions using HTML, CSS and JavaScript.

Business Analytics Intern Jun. 2023 – Sep. 2023
Dhyanalinga Power Solutions Coimbatore, India

- Employed Machine learning based **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.
- Created **CI/CD** pipeline to develop node.js application increments with GitHub Actions and Netlify.

Undergraduate Student Researcher (Embedded AI) Jan. 2023 – May. 2023
Amrita Vishwa Vidyapeetham Coimbatore, India

- Wrote **Linux** scripts and modified code in **C make** files to resolve build issues in legacy software.
- Designed an algorithm of $O(n \cdot \log(n))$ complexity to distribute inference load among multiple AI accelerators.
- Developed an algorithm to analyse of complexity deep learning models in Intermediate Representation (IR).

SKILLS

Technical Skills: Python, C, C++, Java, JavaScript, Scala, Data Structures, Algorithms, SQL, MongoDB, ML Algorithms, Neural Networks, NLP, RAG, Optimization techniques, Agile.

Libraries/Frameworks: OpenCV, pyTorch, pandas, NumPy, matplotlib, Scikit-learn, Seaborn, OpenGL, GLSL Elastic, Kibana Query Language, Cisco packet tracer, Git. React.js, Node.js, Express.js

Soft skills: Problem-solving, Analytical thinking, Communication, Teamwork and Leadership.

PROJECTS

Library Management System Jan. 2022 – Apr. 2022
Amrita Vishwa Vidyapeetham Coimbatore, India

- Managed a group of 4 people to develop library management system and acted as project scrum master.
- Created responsive forms with React.js and bootstrap for multiple functions such as add/delete book, borrow.
- Created JavaScript functions to process form input and push updates to database using firebase API.
- Create a forum for library users and achieved real-time synchronization across all user portals.
- Integrate google books API to help users access eBooks and its descriptions in the library.

Exam Scheduling Management System Aug. 2022 – Nov. 2022
Amrita Vishwa Vidyapeetham Coimbatore, India

- Collaborated with a group of 3 to create an automated exam-scheduling software with minimal inputs.
- Designed a student dashboard to display all upcoming exams and their venues relevant to the student.
- Designed responsive forms using React.js and setup user authentication using node js and firebase API.
- Developed a function that can automatically create exam schedule with dates and courses as input by accessing the enrolment, classroom, and faculty data on firebase DB.