

Kolitha Warnakulasooriya

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A professional software engineer with over 5+ years of experience in full-stack application development and 3+ years in AI research for robotic applications. Proven track record of collaborating with development teams to integrate business logic and optimize components, enhancing customer experience. Demonstrated strong leadership in agile environments, ensuring timely deliveries, effective communication with management, and efficient task delegation.

Education

Ph.D. in Computing (AI)

May 2025

School of Computing, University of South Alabama, United States (GPA: 3.91)

B.Sc. (Hons) in Information Technology

Jul 2018

Faculty of Information Technology, University of Moratuwa, Sri Lanka (GPA: 3.55)

Projects

SwarmX

Jul 2022 – Present

University of South Alabama, Mobile, Alabama

github.com/kolithawarnakulasooriya/SwarmX

- Initiated an open-source swarm intelligence optimization framework with 21 embedded algorithms tested against classical benchmarks and unit-wise.
- Implemented a graphical interface to visualize agent activities based on design patterns.

MineArc Service App

Sep 2021 – Present

Techila Software

minearc.com/serviceapp

- Developed an E2E hybrid application to maintain the service terms based on React and React Native frameworks.
- Implemented a calendar component with the same features as Microsoft Outlook: scheduling, planning, and reminders.

Formula 1 – SAE Hybrid Electric Competition Vehicle

Jan 2024 – May 2025

University of South Alabama, Mobile, Alabama

- Achieved 3rd place in the hybrid category.
- Appointed as the computer team lead, designed and developed the electronic and computing system to collect, manage, and manipulate ECU, BMS, and motor control over the CAN network.
- Developed the FE application to display real-time data on the dashboard with bidirectional communication over the CAN network.

Employment Experience

Graduate Research Assistant

Jan 2022 – May 2025

University of South Alabama, Mobile, United States

- Pursue research to introduce a dynamic leader election algorithm for an autonomous aerial vehicle system based on cognitive intelligence.
- Published three research articles in top-ranked artificial intelligence conferences and journals (AAAI-2023, ICIPRoB, Evolutionary Intelligence)
- Engaged as a lead researcher in Drone Systems and AI Laboratory by leading and administering three core UAV-related research and developed a ROS-based adaptable Python flight framework to operate heterogeneous commercial UAVs such as Tello, Anafi, and Bebop, which can handle a maximum of 15 agents in the cluster.

Associate Lead Software Engineer**Aug 2021 – Jan 2022****SyscoLabs Technologies, Colombo, Sri Lanka****Innovation office - Sysco Corporation (NYSE: SYY), United States**

- Promoted as an assistant engineering manager to the core development team of the Sysco Shop CRM platform with 10+ engineers.
- Coordinated in an agile/scrum environment with planning the sprints, conducting daily stand-ups and retrospective meetings in JIRA, and managing meeting minutes on the Confluence dashboard regarding Q1 of fiscal 2021.
- Acted as an agile Scrum Master, planned the sprints, conducted daily stand-ups and retrospective meetings, and provided guidance along with technical and cultural support to three engineers.

Senior Software Engineer**Dec 2019 – Aug 2021****SyscoLabs Technologies, Colombo, Sri Lanka****Innovation office - Sysco Corporation (NYSE: SYY), United States**

- Utilized modern software engineering expertise to design and develop features for the Sysco Shop CRM web application.
- Proficiently troubleshoot simple and complex issues and contributed as an on-call representative for production incidents, with zero production incidents reported related to the responsible components.
- Served as the core technical support engineer for the product list in ordering features and collaboratively engaged in resolving three critical issues.

Software Engineer**Jul 2018 – Nov 2019****SyscoLabs Technologies, Colombo, Sri Lanka****Innovation office - Sysco Corporation (NYSE: SYY), United States**

- Implemented the React-Native UI components framework for mobile for the entire Sysco Delivery mobile application, featuring 100% customizable in-house components.
- Piloted the development of an open-source, in-memory weight mock API framework package for servicing dynamic mock APIs for all the microservices, which reduced unnecessary subscription expenses by 100%. Encouraged other developers to join open-source systems.
- As the component manager of BFF, ensure that the BFF unit tests and integration tests are covered at over 90% and that Sonar is fully covered.

Software Developer – Self-Employed**Jul 2018 – Dec 2024****Techila Software**

- Led the frontend team to develop and maintain three multi-tenant web applications and two hybrid mobile applications.

Skills

Programming Languages: Java, JavaScript, Python, SQL, C++**Technologies & Frameworks:** React, React-Native, Redux, Expo, Spring boot, NodeJS, ROS**Project Management and Communication:** Jira, Confluence, Slack, Outlook, Microsoft Teams**Editors, IDE, and Tools:** JetBrains IDE, VS Code, MS Office, DBeaver**Databases:** MySQL, PostgreSQL, MongoDB, Redis, Spark**Other:** Pytorch, SonarQube, Datadog, Dynatrace, Optimizely, Google, ChatGPT, AWS, Azure