

Gowsigan Annalingam

Department of Computer Engineering,
University of Peradeniya, Sri Lanka.

Date of birth: 21-02-1999 | Phone: +(94)771015583

LinkedIn: [annalingam-gowsigan](#) | GitHub: [AnnalingamGowsigan](#)
Email a.gowsigan99@gmail.com | Web: annalingamgowsigan.github.io

Skills

Java | C | Python | HTML | CSS | JavaScript | PHP | MySQL | MongoDB | ARM Assembly | Verilog HDL | Git
Spring Boot | React | Express | Firebase | Docker | Postman | Arduino | Amazon EC2 | AWS IoT Core | Linux
Full-Stack | Microservices | Cloud computing | OOP | English , Tamil - **All professional proficiency or above**

Experience

Software Engineering Intern | WS02

08.2023 - 12.2023

Project: **Reusable Demos for Various Industry Verticals**

[Java, Spring Boot, Ballerina, MySQL, Docker, Docker Compose, integration studio, API manager, micro integrator, Postman]

- Collaborated with the Solution Architecture team to develop domain-specific demos for showcasing WS02 platform features during pre-sales engagements.
- Implemented **customizable integration flows** for each business use case, incorporating both REST (XML, JSON) and SOAP services, with robust **error handling** and comprehensive **unit testing**.
- **Dockerized demos** for immediate use in ad-hoc presentations and **documented usage instructions**.
- Wrote Postman scripts to **test APIs**, ensured seamless integration with Local and Docker environments.

Internship Project: **Grama Check** | Group |

[React, Ballerina, MongoDB, Asgardeo, Choreo, Apache JMeter, Microservices]

- Collaborated with two interns to design a system for creating "Gramasewaka" certificates online.
- **Developed and deployed** three services (Address Check, Identity Check, Police Check) on the Choreo platform. Integrated Slack for user support and Twilio for SMS notifications.
- Implemented a single-page web application secured by Asgardeo as the **identity provider**.
- Conducted **load balancing testing** to ensure optimal performance under high traffic conditions.

Education

Faculty of Engineering, University of Peradeniya

Bachelor of the Science of Engineering Honors in Computer Engineering.

Kandy, Sri Lanka | 11.2019 - Present

Current GPA - 3.8/4.00

Veerasingam Central College

G.C.E. Advanced Level (2018)

G.C.E. Ordinary Level (2015)

Jaffna, Sri Lanka | 10.2006 - 08.2018

2As, 1B | Z-Score : 1.8421

8As, 1B

Projects

Virtual Patient Simulator for Skill Training in Dentistry | Group |

12.2023 - Present

[React, Express.js, Node.js, Firebase, Firestore, Cloud Storage, Cloud Functions, Unity Game Engine, WebGL]

- A web-based virtual patient tutoring system is designed for dental students to practice clinical setups virtually and allows tutors to create custom dental cases for skill training.
- **Architected and implemented a robust database system** to store dental case details, including images, examination questions, and incorporated a feature to efficiently reuse existing questions.
- **Implemented dental chart functionality** to capture and store tooth details.
- **Developed backend APIs and hosted the website** using GitHub Actions for CI/CD.

Corals Protector | Group |

10.2022 - 01.2023

[React, Express.js, Node.js, MongoDB, Amazon EC2, AWS IoT, MQTT]

- Developed an IoT device that measures environmental factors for coral growth and uploads data to the website with analytics.
- Created a comprehensive web application that features both tabular and graphical data views, and provides restricted access for various user types.
- Deployed the website on an Amazon Web Services Elastic Compute Cloud (AWS EC2) instance.
- **Contribution:** Developed the database, backend APIs, while also programming the hardware unit.

[Spring Boot, Spring Cloud, Docker, Docker Compose, Kafka, Keycloak, Prometheus, Grafana, PostgreSQL, MongoDB]

- Developing a microservices-based e-commerce application to demonstrate key principles and practices in Spring Cloud and microservices architecture.
- Built and set up services for product, order, inventory, and notifications, confirming their smooth operation together through **integration testing**.
- Utilized various architectural patterns such as **Synchronous Inter-Service Communication, Service Discovery, API Gateway, Security, Circuit Breaker, Event-Driven Architecture, and Observability**.
- **Containerized applications** using Docker and managed services using Docker Compose for local development and testing.

[PHP, Laravel, MySQL, HTML, CSS, Bootstrap]

- Involved in an ongoing departmental project for developing a web application to manage inventory in the MakerSpace Lab of the Department of Computer Engineering.
- **Contribution:** Developed website's front-end, back-end, and database using **MVC architecture**.

[JAVA, Android Studio, FireBase]

- Built a mobile application to track and help to manage the development of babies aged 0 to 5 years.
- **Contribution:** Implemented backend features for calculating BMI and recording height and weight.

[HTML, CSS, PHP, MySQL]

- Developed a database management system to help the management of the quarantine center to keep track of the main operations of the center more easily with user-friendly web interface.
- **Contribution:** Developed the front-end, back-end, and database of the website.

Volunteering

- **C0225: Software Construction** 03.2023 - 07.2023
Supervised weekly 2hr long lab sessions based on Java programming Language.
- **C0253: Introduction to Programming and Networking** 03.2023 - 07.2023
Supervised weekly 2hr long lab sessions based on C programming Language and Networking.

- Collaborated in a team dedicated to enhancing the university's digital presence.




Competitions

Provincial Winner - Central Province in the category of Best Innovative Project - University

1st Runner Up of Sustainable Ecosystems category

27th place out of 70+ teams

Certifications

- Getting Started with the AWS Cloud Essentials | AWS Skill Builder |  01.2023
- Supervised Machine Learning: Regression and Classification | Coursera |  05.2023
- Programming for Everybody (Getting Started with Python) | Coursera |  08.2020

References

Head of Department, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka.

Senior Lecturer, Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka.