RAVINDU ABEYSINGHE
COMPUTER ENGINEER

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Portfolio

INTRODUCTION

Passionate Computer Engineer with strong interests in software engineering, quality assurance, cloud computing, and AI-driven solutions. Skilled in solving problems and building scalable solutions, with a solid understanding of software design patterns and architectural principles.

WORK EXPERIENCE

Software Engineer - Intern | WealthOS   **July 2024 - Dec 2024**

Progress Tracker (Full-Stack Development, Automation & Deployment)

- Engineered and deployed a containerized full-stack web application for sprint analytics. Designed scalable system architecture and relational database schema, implemented backend logic for real-time data aggregation, and automated data ingestion from the Jira API.
- Handled database migrations, domain configuration, HTTPS setup, and end-to-end deployment with robust documentation.

Knowledge Bot (Development, Deployment & Automation)

- Developed and deployed an AI-powered Slack app using RAG architecture, with automated context extraction from Confluence and a containerized, scalable backend for efficient query resolution.
- Actively participated in Agile Scrum processes, with hands-on experience in ceremonies and managing artifacts, demonstrating a strong understanding of Agile principles.

Technologies : Python, Streamlit, Docker, AWS, FAISS, MongoDB, MySQL, Flask, Slack API, Jira API.

EDUCATION

University of Peradeniya   **2021 - 2025**
BScEngHons specializing in Computer Engineering   Current GPA : 3.0 / 4.0

St.Anthonys College   **2007 - 2019**
G.C.E. Advanced Level   AAC

SELECTED PROJECTS

AI Powered Knowledge Management System for NRENS | Group   GitHub   Jan 2025 - Jul 2025

- Final year research project focused on building an AI-driven learning assistant using Retrieval-Augmented Generation. The system enables semantic search, real-time content summarization, and human-like responses through a chatbot interface. It supports adaptive learning by delivering personalized answers based on user queries and retrieved context.
- **Contribution :** Implemented the RAG architecture, designed the backend flow, CI/CD Pipline, performed vector embeddings and semantic search to enable personalized, context-aware responses, and developed the frontend interface for user interaction.
- Technology Stack :**React, TypeScript, Python, Flask, LangChain, ChromaDB , SQLite, Docker , GitHub Actions**

Event Attendance Management System | Group   GitHub   Feb 2024 - Jun 2024

- Developed a real-time event attendance management system integrating web and IoT components to streamline session tracking, attendee monitoring, and session analytics for organizers and participants.
- **Contribution :** Led frontend development of the web application, display interface, and analyzed dashboards. Also designed intuitive UI layouts and implemented dynamic interactions using component-based architecture.
- Technology Stack : **React, JavaScript, Node.js, AWS , Tailwind CSS**

Spring Boot Microservices E-Commerce Platform | Individual   GitHub   Aug 2025 - Present

- Ongoing project focused on building a microservices-based e-commerce application showcasing modern architectural patterns. Implemented core concepts such as service discovery, API gateway, inter-service communication, circuit breakers, and security with Keycloak. Planned enhancements include integrating event-driven architecture with Kafka, adding observability with Grafana and Prometheus, and containerizing services with Docker & Kubernetes.
- Technology Stack : **Java, Spring Boot, Spring Cloud, OpenFeign, Kafka, Keycloak, OpenTelemetry, Grafana, Prometheus, Docker, Kubernetes**

Rhythm Nation Website | Individual   GitHub   Feb 2024 - Mar 2024

- Developed a modern, dynamic music website to showcase emerging artists and celebrate music culture. Configured a CI/CD pipeline with GitHub Actions for automated deployment to GitHub Pages. Planned feature enhancements are underway.
- Technology Stack : **Astro, Typescript, Tailwind CSS, GitHub Actions**

Baby Development Tracking System Mobile Application | Group   GitHub   Nov 2023 - Feb 2024

- A mobile application for Doctors, Midwives, and Parents to oversee the growth of babies from 0-5 years old. It includes features like vaccination tracking, growth monitoring, and user notifications.
- **Contribution :** Developed front-end and back-end components using Java and integrated Firebase to establish and manage database connectivity.
- Technology Stack: **Android Studio, Java, Firebase.**

Library Management System | Group   GitHub   May 2023 - Jun 2023

- Designed and developed a web application for users to manage and monitor books, members, and lending activities within a library system.
- **Contribution :** Developed the frontend of the web application.
- Technology Stack : **HTML, CSS , PHP , MySQL .**

SKILLS

- **Programming Languages:** Java, TypeScript, JavaScript, Python, C#, C, PHP
- **Frameworks:** Angular, Astro, Spring Boot, Android Studio, Streamlit, Flask
- **Libraries:** React, NumPy, OpenCV, Pandas
- **Databases:** MySQL, SQLite, MongoDB, Amazon RDS, ChromaDB
- **Cloud & DevOps:** AWS, Firebase, Docker, Kubernetes , Grafana, Prometheus
- **Tools & Platforms:** GitHub, GitLab, Bitbucket, JIRA
- **Soft Skills:** Problem Solving, Adaptability, Teamwork

CERTIFICATES

Divide and Conquer, Sorting and Searching, and Randomized Algorithms - Meta (Coursera).

Foundations of User Experience (UX) Design - Google (Coursera).

Spring Boot (Backend Development)- (Amigoscode)

Game Theory- Stanford(Coursera)

Introduction to Internet of Things & embedded systems - University of California, Irvine (Coursera).

Introduction to Frontend Development - Meta (Coursera).

Introduction to Backend Development - Meta (Coursera).

Supervised Machine Learning: Regression and Classification - DeepLearning.AI(Coursera)

OOPs in Java - (Great Learning)

COMPETITIONS

ACERS Hackathon | Group: An inter-university hackathon organized by the University of Peradeniya

ACERS PreCoders V10.0: 12-hour algorithmic programming competition organized by the ACERS

ACERS PreCoders V9.0: 12-hour algorithmic programming competition organized by the ACERS

IX 23 2023 : An inter-university UI/UX design competition on Apple VisionPro was organized by the IEEE Student Branch of IIT.

EXTRACURRICULAR ACTIVITES

Member of the ACERS WebTeam, University of Peradeniya.   Jan 2024 - Jan 2025

Member of Project Nanathambara.   Jan 2024 - Jan 2025

Member of the Explorers Club University of Peradeniya.   2022 - Present

REFERENCES

Dr. Isuru Nawinne   **Prof. Roshan G. Ragel**

Senior Lecturer,   Professor,

Department of Computer Engineering,   Department of Computer Engineering,

Faculty of Engineering,   Faculty of Engineering,

University Of Peradeniya, Sri Lanka   University of Peradeniya,Sri Lanka

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