Kalindu Wijerathna

Final Year Engineering Undergraduate

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Passionate and creative tech enthusiast with a strong work ethic, dedicated to building intelligent, scalable systems across the full stack and beyond.

Experience

Creative Software   **Jul 2024 – Jan 2025**
Software Engineer - Intern (6 months)

Full Stack Development Tasks

- Spearheaded the development of 10+ major features for **TrackIT V4**, an enterprise multi-tenant HR management system, using **Java**, **Spring Boot**, **React**, **TypeScript** and **PostgreSQL**.
- Engineered core UI/UX components (Login Page, Navigation Bar, Tool Bar) during frontend migration from Angular to React, ensuring seamless integration with backend authentication via **Microsoft AD** and **Local LDAP** with **JWT**.
- Developed a high-performance **Global Task Search** using a three-layered fuzzy search with **Levenshtein** Distance and integrated it with **Redux** for state management, enhancing discoverability across modules.
- Built a **Global User Preferences Mechanism** using **custom React hooks** and **Context API** to manage system-wide and user-specific settings (locale, language, date-time, currency), with multi-tenant support and flexible UI configuration.
- Designed and implemented a **multi-tenant onboarding frontend service** for purchasing & registering client organizations, with plan selection and initializing tenant-specific environments—enabling customer provisioning.
- Designed and developed a **Generic Form Designer**—a powerful and intuitive interface that enables admin users to create and configure a wide variety of dynamic forms through a user-friendly GUI, without requiring any technical knowledge. Supported flexible layouts, field types, and validation rules to enhance system adaptability.
- Resolved critical bugs in backend services and frontend logic, boosting system stability and reducing QA-reported issues.
- Applied quality standards with **JUnit**, **Allure**, **ESLint**, **Stylelint**, and **SonarQube** to ensure maintainable, testable code.
- Practiced Agile sprint planning, code reviews, and daily standups; followed version control using **Git** and **Azure Repos**.

DevOps Tasks

- Designed and implemented 6 end-to-end **CI/CD pipelines** for frontend (**React**), backend (**Spring Boot**), and Tenant Service modules using **Azure DevOps**, enabling fully automated testing, building, and deployment workflows.
- Configured and managed Linux-based deployment environments across development, testing, staging, and production stages on internal **VPS** infrastructure, including **Apache Tomcat** server setup and **Maven** dependency management.
- Integrated **Allure** for automated test documentation generation and **refactored unit and integration testing pipelines** to improve CI workflow efficiency, reporting clarity, and long-term maintainability.
- Intergrated Enforcement of strict code quality standards through automated linting and formatting workflows with **ESLint**, **Prettier**, **Stylelint**, and **SonarQube**, integrated via pre-commit hooks and CI validations.

University of Peradeniya, Faculty of Engineering   **Apr 2025 – Present**
Casual Instructor - Software Engineering | Computer & Network Security
- Assisting in conducting Software Engineering (CO328) and Computer and Network Security (CO325) laboratories, supporting 3rd-year undergraduate students with practical exercises and concepts.

Education

BScEngHons Specializing in Computer Engineering   **Mar 2021 – Present**
  University of Peradeniya   CGPA: 3.60 / 4.00
GCE Advanced Level Physical Science Stream (A — A — A)   **2019**
  Dharmaraja College, Kandy   Z-Score: 2.164
Cisco Certified Network Associate (CCNA 200-125)   **2020**
AWS Cloud Solutions Architect Professional Specialization   **2024**
  AWS | Coursera – 4 Course Specialization
Java Spring Framework Specialization   **2025**
  LearQuest | Coursera – 4 Course Specialization
Meta Front-End Developer Professional Certificate Specialization (React) **2025**
  Meta | Coursera – 9 Course Specialization
Architecting with Google Kubernetes Engine Specialization   **2025**
  Google | Coursera – 3 Course Specialization
Certified Kubernetes Application Developer (CKAD) Specialization   **2025**
  LearnKartS | Coursera – 3 Course Specialization

Technical Skills

Languages	Java, C, Python, C++, PHP, , JavaScript	**Frameworks**	Spring Boot, React, Node.js, Express
DevOps	Jenkins, Azure DevOps, Ansible, Terraform	**Containerization**	Docker, Kubernetes, Singularity
Cloud	AWS, Google Cloud (GCP), Azure	**Scripting**	Bash, Batch
Databases	MySQL, PostgreSQL, MongoDB	**Networking**	Cisco Routing & Switching, ASA Firewalls
Versioning	Git, GitHub, Azure Repos	**Monitoring**	Prometheus, Grafana, Zabbix

Selected Projects

NLP-Driven Intent-Based Networking Architecture for SDNs (Final Year Research Project)   **Dec 2024 – Present**

– Design and implement a layered architecture integrating **Natural Language Processing (NLP)** with **Software-Defined Networking (SDN)** to translate high-level intents into actionable network configurations.
– Automate diverse topology provisioning using **Mininet**, **Containernet** and **Bash** to assess scalability, resilience, and security; integrate **ONOS** SDN controllers with **Prometheus** and **Grafana** for real-time monitoring and analytics.
– Led NLP model deployment, managing server setup, infrastructure, and API integration for real-time intent processing.

Digital Signage System (Group) – IT Center, University of Peradeniya   **Aug 2023 – Jan 2024**

– **Officially deployed** on-site in Jan-2024 and actively utilized by the university staff members till present.
– Developed a scalable CMS solution replacing manual scheduling with centralized management and dynamic scheduling.
– Built secure **PHP backend APIs** with robust authentication and session management for reliable data access.
– Created a responsive, user-friendly course content management interface using **React** and **TypeScript**.
– Contributed to system architecture, admin dashboards, and scheduling algorithms; Integrated **GitHub Actions CI/CD**.

Acadametrix (Group) – Student Result Management Platform   **Apr 2024 – Dec 2024**

– Built a full-stack result portal with secure role-based access using **Spring Boot**, **Thymeleaf**, **MySQL**, and **Tailwind CSS**.
– Developed RESTful APIs for results, and user management using **Spring Web**, **Spring Data JPA**, and validation.
– Configured **Jenkins CI/CD** pipelines; automated deployment on **AWS EC2**, **VPC** using **Terraform** and **Ansible**.

Pera Link (Group) – Social Media Platform for University of Peradeniya Community   **May 2023 - Aug 2023**

– Built RESTful backend APIs with **Express.js** and **Node.js** for authentication, user management, and real-time data.
– Designed and optimized **MySQL** schema for scalable, efficient social media queries.
– Contributed to system architecture, deployment, and configuration to enhance stability and maintainability.
– This idea (our original undergraduate project) was officially adopted by HackersClub UoP as their first long-term, university-wide initiative; collaborating across faculties with me serving as **DevOps Lead**. (Dec 2024 – Present)

Volunteering/Leadership

Project Nenathambara – Finance Lead   **2023 – 2024**
Manage finances for a nationwide IT workshop series promoting IT education in Sri Lankan schools.
Singularity Containerization Project – DL Workflow Team Member   **Jul 2023 – Dec 2023**
Deployed Singularity containers on HPC servers to support scalable research workflows.
Departmental HPC Server Group Member   **2023 – Present**
Maintain, optimize, and secure HPC servers, including system updates, performance tuning, and cluster node integration.

Competitions / Extra-curricular

ACES Hackathon – 3rd Place   **2023**
48-hour idea-pitching competition with 40+ teams; introduced an open-source charitable platform called *CharityVerse*.
ACES Pre-Coders v10 – 7th place (60+ Teams)   **2023**
6-hour university-wide team coding competition hosted by ACES, University of Peradeniya.
MoraXtream 8.0 – 30th Place (200+ Teams)   **2023**
12-hour island-wide inter-university coding competition organized by University of Moratuwa.
All-Island School Music Competitions – 1st (Classical Singing | Group), 2nd (Folk Orchestra)   **2017**
Visharad in Vocal (2015) & Violin (2016)   **Bhathkande Sangit Vidyapith, Lucknow**
School Orchestra – Singer & Violinist   **Dharmaraja College, Kandy**

References

Prof. Roshan G. Ragel
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