JANITH RANASINGHE

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SUMMARY

Software Engineer with a B.Sc. in Physics and Electronics (GPA 3.23) from University of Kelaniya. Proficient in MERN stack, React.js, Next.js, Node.js, TypeScript, Docker, and cloud platforms (AWS/Azure/GCP certified). Hands-on experience in frontend/feature development, test automation, and backend architecture at Sistena, plus academic research in IoT/ML (ResearchGate publication). Passionate about building scalable applications and automation.

WORK EXPERIENCE

Software Engineer at Sistena **February 2025- Present**

- Primarily responsible for Frontend development of feature implementations, ensuring responsive and clean designs.
- Designed and implemented test automation for web applications.
- Contributed to backend development, including architectural decisions.

Software Engineer Intern at CodeSight **July 2024 - February 2025**

- Developed Wordpress websites
- Created Database architecture for backend.

EDUCATION

Bachelor of Science in Physics and Electronics **July 2021 - July 2024**
University of Kelaniya, Kelaniya, Sri Lanka

- GPA - 3.23
- University Colors in Scrabble (2023)
- University Colors in Scrabble (2022)

Diploma in Digital Marketing (DDM) **June 2021 - June 2022**
Sri Lanka Institute of Marketing (SLIM)

Secondary Education **January 2006 - August 2019**
Dharmaraja College, Kandy

PROJECTS

Intelligent Pedestrian Signal Light System I Final year research project

ResearchGate Publication - Python

- Developed an intelligent traffic management system integrating adaptive signal timers, real-time pedestrian detection (CNN-based), weather monitoring, and IoT components. Implemented on Raspberry Pi 4 Model B for enhanced processing.
- Achieved 80% pedestrian detection accuracy using a CNN model trained on a custom-labelled dataset.
- Reduced average pedestrian crossing time to 18.5 seconds through adaptive signal timing in a real-world case study.
- Upgraded from Arduino to Raspberry Pi 4 Model B, enabling faster real-time processing and multi-input stream handling.

- Developed an IoT-enabled framework for seamless communication between sensors, cameras, and signal controllers.
- Implemented violation deterrence mechanisms (sirens/alerts) to improve pedestrian safety and compliance.

Scrabble Timer
Github Repository - Flutter
- Developed a Scrabble clock application for competitive players worldwide.
- Implemented chess-clock-style timing with intuitive start, pause, and reset functionality.
- Integrated penalty scoring system with automatic disqualifications for exceeding penalty limit.
- Enhanced user experience for fair and efficient gameplay.

Zero-Budget Home Server (Self-Hosted Infrastructure)
Article Link
- Self hosted home server with n8n automation and Linux system administration
- Setup with media server, Pi-hole adblocker with ssh capabilities.

Browser Extension - Email allocator
Github Link
- Developed a Browser extension that visually categorizes Gmail emails using custom labels and colors. Built with JavaScript, with persistent storage and dynamic email detection.

Website for a Book Shop I Full Stack Web project
Demo Website
- Functional Website for a Book Shop as the final project for Web Development course module.

ADDITIONAL INFORMATION

Technical Skills:
- **Frontend**: React.js, Next.js, TypeScript, Tailwind CSS, Flutter
- **Backend**: Node.js, Express, MongoDB
- **DevOps/Cloud**: Docker, AWS (Certified Cloud Practitioner), Azure, GCP, n8n Automation
- **Testing/Tools**: Jest, Git, Postman
- **Other**: Python (ML/IoT), TensorFlow

Languages: English, Sinhala

Certifications:
- Oracle Cloud Infrastructure 2025 AI Foundations Associate (1Z0-1122-25)
- Docker Foundations Professional Certificate
- AWS Cloud Quest: Cloud Practitioner
- GitHub Foundations
- Postman API Fundamentals Student Expert
- Developing Back-End Apps with Node.js and Express
- Classify Images with TensorFlow on Google Cloud
- Introduction to Large Language Models