Gihan Y. Serasinghe

Software Engineer

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Professional Summary

Results-driven Software Engineer with hands-on experience in full-stack development using MERN stack, Java, and Spring Boot. Achieved 30% performance improvement and 25% faster load times through optimized code and cloud architecture. Passionate about building scalable solutions and eager to contribute to impactful projects.

Professional Experience

Software Engineer Internship   *Nova TechZone Pvt Ltd , Maharagama | Sep 2023 – Aug 2024*

- Developed and deployed scalable full-stack web applications using MERN, improving overall system performance by 30%.
- Optimized UI/UX design and implemented efficient state management (e.g., React Context), reducing load time by 25% and increasing user satisfaction.
- Integrated cloud-based APIs (e.g., AWS/Azure services) and implemented error handling, boosting reliability and uptime by 40%.
- Conducted market research and competitor analysis to identify new opportunities and refine marketing strategies.
- Collaborated with cross-functional Agile teams to deliver client projects 10% ahead of schedule while maintaining high-quality standards.

Education

Bachelor of Science (Hons) in Information Technology (Specializing in IT)   *SLIIT University, Malabe | Graduated 2025*

- Relevant Coursework: Machine Learning, IoT, Cloud Computing, Web Development, Database Management, and System Design.
- Key Achievement: Developed the Brahmi OCR & Translation System as final-year research, achieving 92% accuracy in script recognition and translation.

Skills

Technical Skills

- Programming Languages: Python, JavaScript, Java, C, C++
- Frontend Development: React, React Native, HTML/CSS
- Backend Development: Node.js, Express.js, Flask, Spring Boot
- Cloud Platforms: AWS, Azure
- Databases: MongoDB, SQL, PostgreSQL
- DevOps & Tools: Git, Docker, Jenkins, GitHub Actions, Vercel, Figma, VSCode

Soft Skills

- Problem-Solving & Analytical Thinking
- Agile Methodology & Cross-Functional Collaboration
- Adaptability & Continuous Learning
- Communication & Requirements Gathering
- Leadership & Flexibility

Technical Projects

AI-Based Fall Detection System (IoT)   **|** *Node.js, Express.js, MongoDB, MQTT* **|** *Feb 2024 – Apr 2024*

- Engineered a real-time IoT system for fall detection and emergency alerting, utilizing sensor data and MQTT for instant communication.
- Developed a Node.js backend with MongoDB for real-time monitoring and data processing.
- Achieved a 40% reduction in emergency response time, significantly enhancing safety for elderly users.

Brahmi OCR & Translation System (Final Year Research)   **|** *Python, TensorFlow, Flask, React Native, MongoDB* **|** *May 2024 – May 2025*

- Developed a deep learning pipeline for optical character recognition (OCR) and translation of ancient Brahmi script into Sinhala.
- Implemented metadata extraction features to support academic research.
- Digitized over 100 historic texts, achieving 92% accuracy and aiding cultural preservation efforts.

Educational Institute Management System   **|** *MongoDB, Express.js, React.js, Node.js (MERN)* **|** *Mar 2023 – Jun 2023*

- Architected a full-stack web application to automate academic administrative workflows.
- Built modules for student registration, class scheduling, material management and results management.
- Boosted administrative efficiency by 45% through process automation and centralization.

E-Channeling Web Application   **|** *Java, SQL, HTML/CSS* **|** *Aug 2022 – Oct 2022*

- Constructed a secure, online appointment scheduling system for healthcare clinics.
- Designed robust booking and patient record-keeping modules with an SQL database.
- Reduced manual scheduling errors by 50%, streamlining the entire patient management process.

Certifications

- Research Presentation | 16th International Conference on Computing, Communication and Networking Technologies (ICCCNT) | July 2025
- AWS Academy Cloud Foundations | AWS Academy | 2024
- Introduction to MongoDB | MongoDB University | 2024
- Azure Cognitive Services | DevTown | 2023
- Azure & Web Services | DevTown | 2023
- Complete Backend Development | Microsoft | 2023

Languages

- English (Professional Working Proficiency)
- Sinhala (Native)

References

- Mr. Udaya Jayasekara
  Civil Engineer
  Phone: +94 70 241 8325

- Mrs. K. H. K. Shashikala
  System Engineer
  Phone: +81 70 1547 1028