

Chalitha Laksahan

Aspiring Software Engineer

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github.com/chalithalaksahan

Summary

Engineering Lab professional with 3+ years of experience in building and calibrating digital systems, currently pursuing a Software Engineering diploma while maintaining full-time engineering role. Expertise in translating physical engineering concepts into reliable digital outputs, now applying the same systematic, detail-oriented approach to software development. Proficient in Java (OOP), JavaScript, and actively expanding into modern frameworks including Spring Boot. Brings a unique perspective from precision instrumentation and process control, combining analytical rigor with hands-on software development skills. Eager to contribute to a software engineering team as a Software Engineer.

Technical Skills

- **Programming Languages:** Java, JavaScript, PHP
- **Web Technologies:** HTML5, CSS3, Bootstrap, Tailwind CSS
- **Currently Learning:** Spring Boot (enterprise Java development), RESTful API design, Database integration
- **Planned Technologies:** React, Angular, Flutter, MERN Stack
- **Concepts & Methodologies:** Object-Oriented Programming (OOP), MVC Architecture, Design Patterns (Observer, Singleton), System Integration, Data Structures, Algorithms, Calibration Protocols
- **Tools & Platforms:** Git, GitHub, VS Code, NetBeans, IntelliJ IDEA, MySQL, Figma, Postman
- **Domain Knowledge:** Sensor Systems, Data Acquisition, Precision Instrumentation, Process Control, Quality Assurance
- **Professional Skills:** Conflict Resolution, AI Literacy, Adaptability, Problem-Solving, Attention to Detail, Cross-Functional Collaboration

Projects

Burger Ordering Application | Java, NetBeans https://github.com/chalithalaksahan/Burger_App-New

- Developed complete order management system using MVC architecture and custom linked list data structures
- Implemented persistent data storage using FileReader/FileWriter for managing orders and customer information
- Applied core OOP principles: encapsulation for data security, inheritance for user role hierarchy, polymorphism for flexible operations
- Built comprehensive features: real-time order tracking, customer analytics for identifying best customers, dynamic status updates with file-based persistence
- Demonstrated understanding of separation of concerns through clean architecture design

Spring Boot REST API | Java, IntelliJ IDEA <https://github.com/chalithalaksahan/springboot-restAPI>

- Built RESTful API using Spring Boot framework demonstrating core REST architectural principles
- Implemented CRUD operations with proper HTTP methods (GET, POST, PUT, DELETE) and tested endpoints using Postman
- Leveraged Spring Boot's dependency injection and IoC container for loosely coupled, maintainable code architecture
- Configured Spring Boot application with proper annotations (@RestController, @RequestMapping, @GetMapping, @PostMapping)
- Demonstrated practical application of enterprise Java development patterns and modern backend architecture

Simple Chat Application | Java, NetBeans <https://github.com/chalithalaksahan/chatApplication>

- Built real-time messaging system leveraging polymorphism for flexible message handling across different message types
- Demonstrated runtime polymorphism for dynamic message processing and type-specific behavior
- Implemented clean interface design for extensible messaging functionality

Defense System Simulation | Java, NetBeans <https://github.com/chalithalaksahan/DefenseSystem>

- Architected complex simulation system coordinating three defense unit types (Helicopter, Tank, Submarine) with specialized capabilities and unique operational parameters
- Implemented Observer design pattern for centralized MainController managing real-time communications, state updates, and strength calculations across distributed units
- Developed intuitive Java Swing GUIs with interactive controls for unit-specific operations (shooting, missiles, laser, sonar)
- Created modular, scalable architecture using inheritance hierarchies and interface-based design for extensibility
- Built dynamic resource management system tracking ammunition, soldiers, energy, and oxygen levels with real-time updates

Certifications

Java: Data Structures – LinkedIn Learning Dec 2025

- Completed comprehensive course covering Java data structures implementation and usage
- Certificate ID: cbfdd5752faee5c88278ef584df644d0bed59f5198829f2faac479b90dc63213

JSON Essential Training – LinkedIn Learning Dec 2025

- Completed comprehensive course on JSON syntax, structure, and integration
- Certificate ID: accaafdbead437d2f41d09db0c98ad4564acf20a8381387a2d9650bae0131d2a

Education

iCET - Institute of Computer Engineering Technology, Dip. Software Engineering July 2025 – Current

- **Coursework:** Algorithm design, control structures, modular programming, Encapsulation, Inheritance, Polymorphism, Abstraction, MVC patterns, File I/O, Collections
- Balancing full-time work with intensive software engineering coursework, demonstrating strong time management and commitment to career transition

Sipway Campus, Dip. Graphic Design Dec 2024 – June 2025

- **Design Artwork:** Logo Design, Visiting Card Design, Flyer and Brochure Design, Poster
- **Image Manipulation:** Retouch image, Correct color levels, Mask image, Re-sample image, Use AI

Sri Sangabodhi Central-Dankotuwa, GCE Advanced Level - Mathematics Stream Jan 2012 – Aug 2014

- **Subjects:** Mathematics, Physics, Chemistry

Experience

Engineering Lab Professional, 3S Fabrication Pvt Ltd – Daluwela, Dankotuwa June 2022 – Current

- Developed and implemented calibration protocols for sensors measuring critical parameters from pharmaceutical compounds to aircraft components and ship displacement weights
- Successfully troubleshooted complex sensor systems, identifying and resolving discrepancies in multi-variable measurement environments requiring systematic debugging approach
- Demonstrated exceptional adaptability in managing diverse technical challenges across multiple industries (pharmaceutical, aerospace, maritime)
- Applied conflict resolution skills to coordinate cross-functional teams and address technical discrepancies between hardware specifications and operational requirements
- Maintained meticulous documentation and quality assurance standards, ensuring data integrity and regulatory compliance across all calibration processes

Learning Roadmap

Current Focus: Deepening expertise in Spring Boot framework for enterprise Java development, building RESTful APIs, and understanding dependency injection patterns

- **React.js** – Modern frontend development with component-based architecture and state management
- **Angular** – Enterprise web applications with TypeScript and comprehensive framework features
- **Flutter** – Cross-platform mobile development for iOS and Android with single codebase
- **MERN Stack** – Full-stack JavaScript development (MongoDB, Express.js, React, Node.js) for end-to-end web applications