

# Chalitha Laksahan

Aspiring Software Engineer

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[github.com/chalithalaksahan](https://github.com/chalithalaksahan)

## Summary

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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

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- **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

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**Burger Ordering Application | Java, NetBeans** [https://github.com/chalithalaksahan/Burger\\_App-New](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

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<b>Java: Data Structures</b> – LinkedIn Learning	Dec 2025
<ul style="list-style-type: none"> <li>• Completed comprehensive course covering Java data structures implementation and usage</li> </ul>	
• Certificate ID: cbfdd5752faee5c88278ef584df644d0bed59f5198829f2faac479b90dc63213	
<b>JSON Essential Training</b> – LinkedIn Learning	Dec 2025
<ul style="list-style-type: none"> <li>• Completed comprehensive course on JSON syntax, structure, and integration</li> </ul>	
• Certificate ID: accaafdbdead437d2f41d09db0c98ad4564acf20a8381387a2d9650bae0131d2a	

## Education

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<b>iCET - Institute of Computer Engineering Technology</b> , Dip. Software Engineering	July 2025 – Current
<ul style="list-style-type: none"> <li>• <b>Coursework:</b> Algorithm design, control structures, modular programming, Encapsulation, Inheritance, Polymorphism, Abstraction, MVC patterns, File I/O, Collections</li> <li>• Balancing full-time work with intensive software engineering coursework, demonstrating strong time management and commitment to career transition</li> </ul>	
<b>Sipway Campus</b> , Dip. Graphic Design	Dec 2024 – June 2025
<ul style="list-style-type: none"> <li>• <b>Design Artwork:</b> Logo Design, Visiting Card Design, Flyer and Brochure Design, Poster</li> <li>• <b>Image Manipulation:</b> Retouch image, Correct color levels, Mask image, Re-sample image, Use AI</li> </ul>	
<b>Sri Sangabodhi Central-Dankotuwa</b> , GCE Advanced Level - Mathematics Stream	Jan 2012 – Aug 2014
<ul style="list-style-type: none"> <li>• <b>Subjects:</b> Mathematics, Physics, Chemistry</li> </ul>	

## Experience

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<b>Engineering Lab Professional</b> , 3S Fabrication Pvt Ltd – Daluwela, DANKOTUWA	June 2022 – Current
<ul style="list-style-type: none"> <li>• Developed and implemented calibration protocols for sensors measuring critical parameters from pharmaceutical compounds to aircraft components and ship displacement weights</li> <li>• Successfully troubleshooted complex sensor systems, identifying and resolving discrepancies in multi-variable measurement environments requiring systematic debugging approach</li> <li>• Demonstrated exceptional adaptability in managing diverse technical challenges across multiple industries (pharmaceutical, aerospace, maritime)</li> <li>• Applied conflict resolution skills to coordinate cross-functional teams and address technical discrepancies between hardware specifications and operational requirements</li> <li>• Maintained meticulous documentation and quality assurance standards, ensuring data integrity and regulatory compliance across all calibration processes</li> </ul>	

## Learning Roadmap

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**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