

# Shubham Singh

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Results-driven Full-Stack Software Engineer with **3 years and 2 months** of experience crafting scalable, secure applications. Expertise in **Java-based** backend development using Spring Boot and microservices, coupled with proficiency in **React.js** for dynamic frontend solutions. Proven track record of optimizing performance, implementing robust security measures, and delivering high-quality software within Agile environments. Adept at translating complex requirements into efficient, user-centric designs. Seeking a challenging role to leverage my full-stack capabilities in creating innovative software solutions that drive business growth.

## Work Experience

### ❖ Project Engineer | Center for Development of Advanced Computing | Mumbai (June 2023 - Present)

- Spearheaded end-to-end development of a secure communication platform, from requirement analysis to successful deployment, achieving **100% functional acceptance** from the client.
- Architected and implemented a robust backend solution from scratch, utilizing **Java/J2EE**, Spring Boot, and **Spring Security** with JWT, resulting in a scalable and maintainable codebase.
- Designed and implemented a sophisticated **multi-database architecture**, successfully integrating and managing two separate SQL databases(**Oracle & Postgresql**) within a single project, enhancing data segregation and security.
- Developed a comprehensive User Management system with **Two-Factor Authentication**, significantly enhancing application security and user account protection.
- Engineered and integrated **WebSocket** functionality, enabling **real-time notifications** and improving overall user experience and engagement.
- Implemented advanced security measures for backend REST APIs, including **JWT authentication**, rigorous **input validation**, and data encryption, achieving a **95% reduction** in security vulnerabilities.
- Established a culture of code quality, achieving **90% code coverage** through comprehensive **unit testing**, and implementing a strict **code review** process that reduced post-deployment issues by 75%.
- Designed and implemented a centralized exception handling system with detailed error messaging, improving **error traceability** and resolution time by **80%**.
- Optimized application performance through strategic refactoring and tuning, resulting in a 40% improvement in response times under high load conditions.
- Implemented a robust error handling and **logging system**, increasing system reliability and reducing debugging time by 50%.
- Played a key role in Agile development processes, actively participating in **sprint planning**, daily stand-ups, and retrospectives, contributing to consistent **on-time delivery** of project milestones.
- **Successfully deployed** version 0.2 to the client environment, **meeting all functional requirements** and receiving positive stakeholder feedback.

### ❖ Java Developer | Center for Development of Advanced Computing | Mumbai (September 2021 - June 2023).

- Engineered a high-performance, **highly available** and **distributed web crawler**, scaling crawling capacity from **10,000 to 200,000 URLs/day**, a 20x increase in throughput.
- Drove code quality initiatives, elevating test coverage from 40% to 85% through implementation of comprehensive unit testing with JUnit, rigorous **code reviews**, and adoption of secure coding practices.
- Optimized backend services for enhanced performance, leveraging **Spring Data JPA**, efficient **Java collections**, and advanced SQL **query optimization** techniques, **reducing average response time by 60%**.
- Contributed to the development of a real-time monitoring dashboard developed on **ReactJs**, visualizing the status of distributed system daemon processes, **improving system observability** and reducing mean time to resolution by 40%.
- Implemented a **robust error handling and logging system**, increasing system reliability and reducing debugging time by 50%.
- Collaborated with **cross-functional teams** to integrate **machine learning** models for content classification, enhancing detection capabilities and **reducing false positives by 75%**.

## Projects

### ❖ Professional Projects

- **CodeBook (Power Grid India)** : Developed a secure communication platform for formal documented communication between WRLDC and stakeholders.
- **RGR and CSAM Detection Online** : Engineered an application to detect and report websites with illegal content to the National Crime Records Bureau of India, involving complex search algorithms and data processing

### ❖ Personal Projects

- **SoundSphere** : Conceptualized and developed an innovative **offline music** streaming application, addressing user needs for **ad-free** listening **without requiring a subscription**. This original solution demonstrates proactive problem-solving and user-centric design thinking. For more details refer SoundSphereBlog : [SoundSphere: A Free, Feature-Rich Music Player \(shubhamgit048.github.io\)](https://shubhamgit048.github.io)
- **User Authentication using JWT** : A spring boot project with JWT-based authentication, implementing secure token management and role-based API access control.

## PROFESSIONAL URLS

- ❖ **Portfolio** : [Shubham's Portfolio \(shubham git048.github.io\)](https://shubhamgit048.github.io)
- ❖ **GitLab**: [Shubham Singh · GitLab](#)
- ❖ **SoundSphereBlog** : [SoundSphere: A Free, Feature-Rich Music Player \(shubhamgit048.github.io\)](https://shubhamgit048.github.io)
- ❖ **LinkedIn** : [Linkedin](#)

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## EDUCATION

- ❖ Bachelor of Technology in CSE | SSGI Bhilai 81.32%, Honors (August 2016 - December 2020)

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## SKILLS

- ❖ **Programming Language** : C, C++, core java, Java/J2EE (Expert), Python (proficient), HTML/CSS (Proficient), Shell Scripting, JavaScript (Proficient)
- ❖ **Frameworks and Tools**: Spring Boot, Spring Security, JWT, RESTful Web Services, JPA, Hibernate, ReactJs
- ❖ **Development Tools**: Git, GitHub, Docker, CI/CD, JUnit, Mockito, Selenium, Jenkins
- ❖ **Cloud & DevOps**: AWS (Familiar), Terraform (Familiar), Cloud Foundry (Familiar)
- ❖ **Database Management**: Postgresql, Oracle, NoSQL (HBase), MySQL
- ❖ **Other**: Agile (Scrum/Kanban), Microservices, API Documentation, Problem Solving, Debugging, Face Detection (AI/ML) (Familiar)
- ❖ **Soft skills**: Communication-Skill , Interpersonal-Skill , Innovative , Collaborative , critical thinking, decision-making , leadership skills, contributive, strong written and verbal communication, presentation skills

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## ACHIEVEMENTS

- ❖ Led the development and deployment of a critical software project under stringent deadlines.
- ❖ As **module lead** of the crawler, I got multiple opportunities to demonstrate in front of officials of the **Home Ministry of India**.
- ❖ As **Backend module lead**, I had the opportunity to interact and conclude the requirement elicitation process with the chairman of **Power Grid of India** (CodeBook).
- ❖ **Successfully deployed** version 0.2 to the client environment, **meeting all functional requirements** and receiving positive stakeholder feedback.

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## CERTIFICATIONS

- ❖ Cpp Certification by Spoken Tutorials Project , IIT Bombay
- ❖ Certification for Vocational Training on Web Development , Seedit Solutions
- ❖ HackerRank Problem Solving

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## PROFESSIONAL EXPERIENCE

- ❖ **Center for Development of Advanced Computing** , Mumbai : (September 2021 - present)  
Engaged in software development, system design, testing, and ensuring operational security and stability using Java-based applications and distributed systems.