# Shubham Kumar

Senior Software Engineer at Optum Global Solutions (UHG)

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## 👤 Professional Summary

Highly motivated Senior Software Engineer at Optum Global Solutions (UHG), specializing in API optimization, security enhancements, and scalable backend development. Proficient in Java, Spring Boot, ReactJS, Kafka, and Kubernetes, with a strong foundation in information security backed by a Master of Technology in Information Security. Demonstrated expertise in resolving critical incidents, implementing test-driven development, and developing robust digital solutions. Adept at leveraging microservices architecture and modern tools to deliver efficient, secure, and high-quality software solutions while committed to continuous learning and excellence in software development.

## ⚙️ Skills

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|---|---|
| **Programming Languages** | C++, Python, Java, JavaScript, SQL |
| **Front End** | HTML, CSS, ReactJS |
| **Back End** | Spring Boot, MySQL, MongoDB |
| **Tools & Frameworks** | JUnit, Mockito, REST API, Kubernetes, Kafka, Git, Jenkins, GitHub Actions, Rally, Postman, SonarQube, MS Office |
| **IDEs** | Visual Studio, IntelliJ IDEA, Eclipse, Atom |
| **Monitoring & Logging** | Splunk, Kibana, New Relic, Zenmap, Lens |
| **Soft Skills** | Problem Solving, Troubleshooting, Debugging, Data Structures & Algorithms, Test-Driven Development (TDD), Microservices Architecture, Object-Oriented Programming (OOP), Microservices, Software Development Life Cycle |

## 💼 Professional Experience

### </> Senior Software Engineer
**March 2025 – Present**

*Optum Global Solutions (UHG)*
📍 Noida, Uttar Pradesh, India

- **API Optimization**: Enhanced the Kafka streams and RESTful architecture, leading to a 10% improvement in API performance times through effective code refactoring.
- **System Uptime Maintenance**: Resolved critical high-priority ServiceNow incidents, maintaining a 99.95% system uptime by bolstering security protocols and system stability.
- **Full-Stack Development Impact**: Spearheaded the refactoring of the Provider Digital Security Application, facilitated the integration of frontend and backend APIs using React.js, Abyss, and MongoDB. Successfully eliminated critical and high vulnerabilities, improved code quality and migrated the code to the latest version of Spring and Java 21, thereby enhancing ticket resolution time by 20%.
- **Advanced Monitoring Solutions & Code Review**: Developed new dashboards for Splunk, Kibana and New Relic. Established war room alerts and pager notifications for quicker issue resolution. Conducted code reviews to ensure the merging of high-quality, secure, and bug-free code.
- **Leadership & Team Building**: Mentored new graduates and streamlined the onboarding process for new hires, reducing onboarding time by 30%. Conducted daily scrum meetings to monitor progress and fostered a high-performing, collaborative team environment.
- **Key Tools & Technologies**: Java, Spring Boot, React.js, Kafka, GraphQL, JUnit, CodeQL, Splunk, Kibana, ServiceNow, MongoDB, Git, Kubernetes, JMeter, OpenLens

### </> Software Engineer
**Jul 2022 – Feb 2025**

*Optum Global Solutions (UHG)*
📍 Noida, Uttar Pradesh, India

- **Database Performance Enhancement**: Created and ran multiple database migration scripts to update the database, optimizing our MongoDB database to accelerate performance.
- **Incident Resolution**: Successfully resolved over 200 high-priority incidents on ServiceNow, maintaining a 99.9% system uptime and bolstering security protocols.
- **Software Development**: Participated in the design and integration of frontend and backend APIs for the Digital Security Helpdesk Portal. Utilized technologies like React.js, Abyss, and MongoDB, which improved ticket resolution time by 15%.
- **Monitoring Solutions**: Assisted in the deployment of production monitoring systems using tools like Splunk, Kibana, and New Relic. Automated database maintenance was achieved through cron jobs, reducing system downtime by 10%.
- **Team Collaboration**: Played an instrumental role in the onboarding process of new team members, fostering a collaborative and productive team environment.
- **Key Tools & Technologies**: Java, Spring Boot, React.js, Kafka, GraphQL, JUnit, CodeQL, Splunk, Kibana, ServiceNow, MongoDB, Git, Kubernetes, JMeter

### 🖥️ Teaching Assistant
**Jan 2022 - May 2022**

*Indian Institute of Information Technology*
📍 Gwalior, Madhya Pradesh, India

- Assisted students in C Programming Lab for 1st-year B.Tech students and AI Lab for 2nd-year B.Tech students, helping with C programming and AI-related coding questions, provided live coding classes, and promptly answered students' queries.

## 🔧 Projects

### 🔒 Digital Security for Provider Portal
**United HealthCare Services, Inc.**

- **Project Overview:**
  - **System Design**: The system is engineered to manage authorization for over 1.4 million users, processing approximately 1.2 billion transactions annually. This enables users to gain access authorization within the UHG provider portal.
  - **Data Security**: The system employs Spring Security, JWT, and HashiVault technologies for robust data security. This ensures the protection of sensitive data from unauthorized access, both internally and externally.
  - **User Access and Authorization**: The system permits users to access various tools and organizations upon registration with their Taxpayer Identification Numbers. It meticulously monitors user access records, managing user authorization securely for the portal's tools.
- **Key Technologies**: Java Spring Boot, React.js, MongoDB, Spring Security, JWT, RESTful APIs, Apache Kafka, HashiVault

### ☑️ Enhanced Provider Validation (EPV) Portal
**United HealthCare Services, Inc.**

- **Description:**
  - **Portal Design and Development**: Devised the Enhanced Provider Validation (EPV) portal to register Tax Identification Numbers (TINs) not linked to United Health Group (UHG), utilizing key technologies such as Java Spring Boot and React.js.
  - **Data Validation**: Integrated a validation process through which the submitted TINs are verified by a dedicated team, using RESTful APIs for data interchange and MongoDB for data management.
  - **User Interaction and Data Flow**: Implemented functionalities for users to upload documents and other relevant details. The data is then funneled through the Kafka channel for further validation, offering users the ability to track their status on the portal.
- **Key Technologies**: Java Spring Boot, React.js, MongoDB, Spring Security, JWT, RESTful APIs, Apache Kafka, Pega

## 🏛️ Education

### 🎓 Master of Technology (M.Tech) in Information Security
**July 2020 – June 2022**

*Indian Institute of Information Technology*
📍 Gwalior, Madhya Pradesh, India

### 🎓 Bachelor of Technology (B.Tech) in Computer Science & Engineering
**June 2015 – July 2019**

*West Bengal University of Technology*
📍 Kolkata, West Bengal, India

## ⚙️ Publications

### Securing IoT with Blockchain: Detecting Malicious Nodes with TLS Certificates

*International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3)*, June 8, 2023

## ⚙️ Certifications

- AWS S3 Basics
- React - The Complete Guide 2024 (Incl. React Router & Redux), Udemy
- Core Java - Full Course, Udemy

## 🏆 Achievements

- ⭐ Qualified GATE-CS in 2020, and 2022.
- ⭐ Achieved Global Rank: 148 in September Challenge 2021 Division 3 on CodeChef.
- ⭐ Earned a 5-star rating in C++ Programming on HackerRank.