

AAYUSH SHRESTHA

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PROFESSIONAL SUMMARY

Experienced Software Developer with 5+ years of expertise in building scalable backend systems, microservices, and RESTful APIs using Java (Spring Boot) and Python. Skilled in Apache Kafka for high-performance messaging, containerization with Docker/Kubernetes, and AWS cloud deployment. Proficient in SQL databases (PostgreSQL, MySQL) with a strong foundation in Agile methodologies, TDD, and CI/CD automation.

TECHNICAL SKILLS

- Programming Languages:** Java 8, C# (.NET 6/.NET Framework), C, C++, Python, SQL
- Frameworks & Libraries:** Spring (Spring Boot, MVC, Data JPA), JDBC, JUnit, Cucumber, Mockito
- Cloud/DevOps:** AWS (EC2, S3, Lambda, RDS, ECR, EKS, IAM), Docker, Kubernetes, SonarQube, CI/CD (Jenkins, GitHub Actions)
- APIs & Tools:** REST, SOAP, Apache Kafka, Postman, Git, Maven, Gradle
- Databases & Markup Languages:** MySQL, PostgreSQL, JSON, YAML, HTML, XML
- Methodologies:** Agile (Scrum), Waterfall, Test Drive Development (TDD)

EXPERIENCE

- Software Developer**
OSS Delivery, AMDOCS Development Center

Jan 2021 - Aug 2022
Gurgaon, India

 - Developed robust backend microservices (**Java 8, Spring MVC, Data JPA**), boosting API performance by **40%** using DTO projections for optimized data retrieval and ensuring standardized repository usage with SonarQube, for cloud-native deployments.
 - Configured **SSO login** via **Azure Active Directory** with **SAML protocol** to enhance user authentication across client websites, reducing login-related support issues from **50+ to under 15 per month**.
 - Delivered critical **pre-production support** during System Integration Testing (SIT) by collaborating with offshore stakeholders to rapidly adapt code, resolve defects, and iterate on deployments, accelerating **MVP deployment speed by 20%**.
 - Contributed to automating **Jenkins CI/CD** pipelines by implementing **Docker** image versioning in **AWS ECR** and templating **Kubernetes** deployments to clusters hosted on **AWS EC2** infrastructure, slashing build times by **almost half**.
 - Advocated **TDD practices** with **JUnit**, achieving **85% test coverage**, and enforced **clean code standards** using **SonarLint**, significantly reducing code smells from **200+ to <50**.
 - Managed **technical designs** and **sprint planning** through **JIRA**, overseeing user story assignments, effort estimation, and coordinating defect resolution, contributing to streamlined, **agile workflows** and efficient **bug tracking**.

Tech Stack: Java, Spring Boot, Spring MVC, Spring Data JPA, Micro services, SAML, Git, IntelliJ IDE, Postman, SoapUI, Jenkins CI/CD, Kubernetes, Docker, SonarQube, SonarLint, JIRA, Azure Active Directory, AWS (ECR, EC2)
- Software Engineering Associate**
OSS Delivery, AMDOCS Development Center

July 2019 - Dec 2020
Gurgaon, India

 - Enhanced enterprise-level **B2B OSS solutions** for resource and order management of Ethernet and Internet services for **Telstra** - Australia's leading telecom provider.
 - Developed and optimized **20+ critical microservices** end-points, featuring a pivotal **Spring Boot** message handler that seamlessly connected downstream **Apache Kafka** traffic with upstream REST APIs, **reducing communication latency by 10ms**.
 - Led development of automated testing frameworks (**Cucumber, TestNG**), achieving **75% code coverage** and reducing manual unit testing time by **nearly 50%** through integration with a Spring Boot application simulating Kafka transactions.
 - Enhanced **API security** by implementing a **Java Servlet/Spring Security** based preemptive authorization at the Kubernetes Ingress layer, integrated with Amdocs's core security, to block unauthorized Spring controller access.
 - Partnered with system architects on modernization of legacy TMF 640 REST API architecture through a TMF 641 wrapper for the core order orchestration pipeline, enabling comprehensive order lifecycle management features.
 - Authored comprehensive API documentation using **Swagger** (YAML) that decreased developer onboarding time and streamlined integrations, and performed rigorous endpoint/stability testing with **Postman/SoapUI** to ensure high API reliability.

Tech Stack: Java, Spring Boot, Kafka, Cucumber, IntelliJ IDE, Swagger, Postman, SoapUI, Jenkins, Apache Tomcat, JUnit, Microservice, REST APIs, JIRA, Git
- Application Developer**
Graphics and Experiential Media Lab, Dalhousie University

Oct 2022 - Oct 2024
Halifax, Canada

 - Engineered backend components in **C#** for a VR city simulation, designing APIs (**AWS Lambda and API Gateway**) to serve dynamic game scene data from **S3**, enabling real-time interactive experiences for visually impaired users within the **Unity client**.
 - Developed server-side logic supporting advanced non-visual navigation for visually impaired users, including spatial audio and haptic feedback coordination, ensuring low-latency responses for an immersive VR experience.
 - Integrated **Apache Kafka** for asynchronous event streaming of user interaction data, system telemetry, and simulation events for post-experimental analysis and robust error logging.
 - Applied an **Agile framework** to iteratively develop system implementations, validating accessibility features and collecting research insights through systematic user evaluations involving 20 participants.
 - Authored a **research paper** on accessible VR design, accepted to **CHI'25 (ACM Conference on Human Factors in Computing Systems)**, contributing to the understanding of user-centred design for vulnerable populations.

Tech stack: Unity, C#, Microservices, REST, Kafka, JSON, Python, Arduino IDE, VS Code, OpenXR, SteamVR, Git, CI/CD, AWS (Lambda, S3, API)

EDUCATION

- Dalhousie University | Master's in Computer Science**
GPA: 4.2/4.3

Sept 2022 - Aug 2024
Halifax, Canada
- National Institute of Technology | Bachelor's of Technology, Computer Engineering**
GPA: 8.3/10

June 2015 - May 2019
Kurukshetra, India