

Ashwini Kalyani

Backend Software Engineer | Python/FastAPI · Django · Java/Spring Boot · C# · C++ · REST APIs · PostgreSQL · Cloud Systems
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Professional Summary

Backend Software Engineer with around **5 years** of experience building and supporting production applications across healthcare, payroll, and enterprise software. Develops Python/FastAPI and Django backend services, secure REST APIs, PostgreSQL data-access components, automated tests, and cloud-deployed microservices. Delivered API integrations across healthcare and payroll systems, supported workflows processing **48K+ employee records**, resolved **126+ production incidents**, and deployed containerized services across **six environments** using Docker, Kubernetes, and Amazon EKS. Additional experience includes C# and C++ development for enterprise application components, debugging, and integration workflows. Built an AI-enabled Java/Spring Boot technical-support project using Spring AI and the OpenAI API, including prompt orchestration and document-context workflows.

Experience

Optum

USA

Software Engineer

May 2026 – Present

- Improved healthcare claims and member-eligibility processing across **2 business modules** and **2 production releases** by developing **Python/FastAPI** backend enhancements aligned with Agile delivery requirements.
- Enabled automated exchange of member-eligibility and claims data across **5 internal service endpoints** by designing and implementing **REST APIs** with request validation, response contracts, and error-handling logic.
- Developed and maintained **C# and C++** backend components alongside Python services for application functionality, defect troubleshooting, interface integration, and production-ready enhancements.
- Increased release confidence by automating unit and integration coverage for **48 claims-processing and eligibility scenarios** using **Pytest**, identifying **19 defects** before user acceptance testing.
- Improved production-support responsiveness by resolving **17 application tickets** through SQL analysis, application-log investigation, root-cause analysis, and documented corrective actions.
- Supported reliable production delivery by partnering with product owners, QA engineers, and developers on sprint planning, code reviews, test validation, and deployment readiness.

Paychex

USA

Software Developer

Aug 2025 – May 2026

- Delivered payroll-processing functionality across **6 production releases** by developing **Python/Django** workflows for earnings, deductions, and tax-rule calculations.
- Enhanced **C# and C++** components supporting payroll application functionality, troubleshooting, data exchange, and integration workflows.
- Enabled synchronized employee and payroll data across **7 internal services** by integrating **OAuth 2.0-secured REST APIs** for employee-management and payroll applications.
- Supported payroll import, validation, and reporting at scale for **48K+ employee records** by building **Django ORM** and **PostgreSQL** persistence components.
- Improved payroll-administration workflows across **8 application screens** by delivering **React.js** and **TypeScript** interface enhancements in partnership with product and business stakeholders.
- Increased release quality by validating payroll business rules and secured REST API behavior using **Postman**, functional testing, defect analysis, and pre-production verification.
- Contributed to predictable Agile delivery by participating in backlog refinement, sprint planning, code reviews, and cross-functional collaboration with Product Owners, Business Analysts, QA engineers, and developers.

Persistent Systems

INDIA

Software Engineer

Oct 2021 – Jul 2023

- Integrated monitoring data from **11 network-data sources** by developing a Java-based TechPack that ingested external REST APIs and connected data to **React.js** dashboard workflows.
- Maintained deployment consistency across **6 environments** by deploying and supporting containerized microservices with **Docker, Kubernetes, and Amazon EKS**.
- Restored production stability across client environments by performing Linux-based diagnostics, application-log analysis, and root-cause analysis to resolve **126+ production incidents**.
- Maintained monitoring availability within SLA targets by providing L2/L3 support for **IBM Tivoli Netcool** and TNCP enterprise network and application-monitoring environments.
- Closed **32 PSIRT and PVR security findings** by implementing software fixes, validating deployments, and confirming remediation results against customer compliance requirements.
- Improved operational troubleshooting by creating **9 Bash/Linux utilities** for health checks, log validation, error reporting, and server-maintenance tasks.

Robosoft Technologies

INDIA

Junior Software Engineer

Jan 2020 – Sep 2021

- Delivered **Java/Spring MVC** backend functionality across **4 application modules** and **5 release iterations** by converting business requirements into tested features.
- Improved application data access and maintainability by building reusable **JDBC and MySQL** components for transaction processing, data retrieval, and persistence operations.
- Supported repeatable release validation by configuring **Git and Jenkins** workflows for automated build verification and deployment preparation across development and test environments.
- Improved customer-facing usability by delivering **10 responsive UI enhancements** using **HTML5, CSS3, and JavaScript** for navigation and data-entry workflows.
- Increased pre-release quality by validating application behavior through **SQL and Chrome DevTools**, resolving **16 defects** before release verification.
- Supported release readiness across **5 release cycles** by collaborating with senior engineers and QA teams to investigate defects, implement fixes, and validate results.

Projects

- **SupportIQ Portal** | *Java, Spring Boot, Spring AI, OpenAI API, PostgreSQL*
Built an AI-enabled technical-support knowledge portal for document search and issue-resolution workflows. Designed layered REST services, prompt orchestration, authentication, and PostgreSQL persistence. Implemented **16 prompt workflows** combining user questions with technical-document context. Secured and documented **20 REST API endpoints** using Spring Security, JWT, and OpenAPI/Swagger.
- **SmartStock Inventory Platform** | *Java, Spring Boot, Angular, MySQL*
Delivered inventory, supplier, and order-management capabilities across **5 business modules**. Packaged application builds with Maven and Docker, managed source control through Git, and resolved functional defects during pre-release validation.

Technical Skills

Languages: Python, Java 17, Java 8, C#, C++, JavaScript, SQL, Bash

Backend Development: FastAPI, Django, Django ORM, Spring Boot, Spring MVC, REST APIs, Microservices, OAuth 2.0, JWT, JDBC, OpenAPI, Swagger

Databases: PostgreSQL, MySQL, MongoDB

Testing: Pytest, Postman, Unit Testing, Integration Testing, API Testing, Functional Testing, User Acceptance Testing

Cloud & DevOps: AWS EC2, Amazon EKS, Docker, Kubernetes, Git, GitLab, Jenkins, Maven, Linux, CI/CD

Frontend: React.js, TypeScript, Angular, HTML5, CSS3, Bootstrap

Engineering Practices: Agile Scrum, SDLC, Code Reviews, Production Deployment, Production Support, Root Cause Analysis, L2/L3 Support

AI Applications: Spring AI, OpenAI API, Prompt Engineering, Prompt Orchestration, Document-Context Workflows, AI-Assisted Code Generation

Education

University of New Haven

Master of Science in Computer and Information Systems

West Haven, CT, USA

May 2025