

# Christopher J. Goeden

## Summary

- Seasoned software engineer with 20+ years of experience designing and delivering highly available, resilient, and scalable distributed systems.
- Proven track record leading teams through complex problems, service rearchitecture, and security compliance initiatives including FedRAMP and PCI.
- Deep expertise in Java, Spring, AWS, and Azure, with hands-on experience across regulated industries including healthcare, finance, and e-commerce.
- Skilled in diagnosing and resolving complex production issues using profilers, query analyzers, and observability tools such as Splunk, and Datadog.
- Experienced in modernizing legacy applications, reducing technical debt, and improving developer productivity through automation, CI/CD pipelines, and generative AI tooling.
- Passionate mentor and technical leader who thrives in collaborative environments, guiding teams on best practices, modern technologies, and architectural decisions.
- Committed to delivering cost-effective, maintainable solutions that meet business goals without sacrificing code quality.

## Skills

<b>Languages</b>	<i>Java 21, Kotlin 2, Groovy 3, SQL, HTML5, CSS3, JavaScript, YAML, JSON, XML, Schema, DTD, XPath, Regular Expressions, Markdown</i>
<b>Frameworks &amp; Libraries</b>	<i>Spring Boot, Spring Framework, Spring Security, Spring OAuth, Spring Data, Spring Cloud, Spring Batch, Spring Integration, Spring HATEOAS, Spring Actuator, Hibernate, JPA, Log4j2, Apache Commons Lang, Apache Commons Collections, Flyway, Liquibase, Swagger, OpenAPI, Feign, resilience4j, Lombok, JUnit, Mockito, Swing, Grails, Spock, coroutines, Ktor, Kotest, MockK</i>
<b>Cloud &amp; DevOps</b>	<i>AWS, Azure, GCP, PCF, Docker, Kubernetes, Swarm, Terraform, GitHub Actions, Azure DevOps, Jenkins, TeamCity, Bamboo</i>
<b>Databases</b>	<i>DynamoDB, MongoDB, Cassandra, PostgreSQL, MySQL, Oracle, SQL Server, Redis, Memcached</i>
<b>Messaging &amp; Streaming</b>	<i>Kafka, SQS, SNS, RabbitMQ, ActiveMQ</i>
<b>Observability &amp; Security</b>	<i>Splunk, Sumo Logic, Datadog, New Relic, Checkmarx, Black Duck, Snyk</i>
<b>Tools</b>	<i>Git, GitHub, Bitbucket, Subversion, Perforce, Gradle, SBT, Maven, Ant, Ivy, IntelliJ IDEA, Eclipse, VSCode, Postman, Locust, SoapUI, JMeter, Gatling, Jira, Confluence, YourKit, Wireshark</i>
<b>Methodologies</b>	<i>Agile, Scrum, Kanban, OOAD, SOLID, SDLC, Design Patterns (enterprise, creational, structural, behavioral), Unit/Integration/Functional Testing, CI/CD, YAGNI, KISS, DRY</i>
<b>Operating Systems</b>	<i>Linux (Debian, Ubuntu, Redhat), Windows, macOS</i>
<b>Web Servers</b>	<i>Apache Tomcat, Apache HTTP Server</i>

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## Experience

### SmartThings

Minneapolis, MN

#### Staff Software Engineer

April 2024 – Present

Contribute as a core member of the team developing and maintaining identity and access management (IAM) services critical to company operations and platform stability. Architect and implement highly available, scalable distributed systems handling substantial web traffic, targeting 99.999% uptime. Drove the successful migration of critical data from Cassandra to Amazon DynamoDB, ensuring continued application performance, scalability, and operational efficiency. Adopted generative AI coding assistants to accelerate development workflows and improve productivity.

- Strengthened application security by identifying and resolving key vulnerabilities, and provided secure coding guidance to cross-functional teams.
- Reduced technical debt and improved application performance by leading upgrades of core libraries and frameworks across the stack.
- Optimized AWS costs and improved system observability by refining logging, metrics, and implementing cost-conscious infrastructure solutions.

**Technologies:** Java (8, 11, 17, 21), Groovy (3.x), Kotlin (2.x), Scala (2.x), Python (3.x), Spring Framework (6.x), Spring Boot (3.4.x), Spring Security, Spring OAuth, Spring Data, Spring Actuator, JUnit (6.x), Grails (6.x), Spock (2.4.x), Akka, Cats, Cats Effect, Coroutines (2.x), Ktor (3.x), Kotest (5.x), MockK (1.x), Cassandra, AWS (EC2, Route 53, Secrets Manager, DynamoDB, ElastiCache, SQS, SNS, CloudWatch), Terraform, Atlantis, Docker, Sumo Logic, Datadog, Checkmarx, Artifactory Xray, Gradle (8.x), SBT (1.x), Apache Tomcat (10.x), Git, GitHub, GitHub Actions, Jenkins, Artifactory, Locust, IntelliJ IDEA, VS Code, Jira, Confluence, Ubuntu, macOS

### Pearson VUE

Bloomington, MN

#### Software Product Architect

September 2022 – April 2024

#### Lead Software Engineer

July 2021 – September 2022

Led a team of 5 developers in migrating 12 applications from on-premise to Azure, building and maintaining microservices for payments, taxes, fraud checks, and vendor fulfillment. Guided developers on best practices for highly available, resilient, and scalable applications, including containerization. Spearheaded the redesign of a monolithic vendor fulfillment application into multiple microservices with asynchronous processing. Implemented monitoring, alerting, CI pipeline enhancements, and performance diagnostics using profilers and query analyzers.

- Led FedRAMP compliance initiative, identifying and resolving security vulnerabilities to meet regulatory requirements.
- Provided high-level designs and estimates for large-scale initiatives, collaborating with cross-functional teams on scope, requirements, and architecture.
- Developed on-call support documentation, establishing clear guidelines and protocols for support rotations.
- Mentored and trained developers on cloud best practices, containerization, and application design patterns.

# Christopher J. Goeden

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**Technologies:** Java (8, 11, 17), SQL, Angular (15.x), Spring Framework (6.x), Spring Boot (3.1.x), Spring Security, Spring Cloud, Spring Data, Spring Integration, Spring Actuator, JAX-RS (3.1), Jersey (3.x), Apache MINA SSHd (2.x), JUnit (5.x), Mockito (5.x), Liquibase (4.x), SQL Server (2019.x), RabbitMQ, Azure (Vault, APIM, ACR, AKS, VMs), Kubernetes, Helm, Docker, Splunk, New Relic, Checkmarx, Snyk, Defender, Black Duck, Contrast, Gradle (8.x), Apache Tomcat (10.x), Git, IntelliJ IDEA, VS Code, Bitbucket, GitHub, Digital.ai, Confluence, TeamCity, Jenkins, Azure DevOps, Artifactory

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## Express Scripts

Edina, MN

### Senior Software Engineer

May 2019 - July 2021

Joined a team as a consultant developing a RESTful service for accessing medical observation data spanning multiple terabytes from various sources including DB2 and PostgreSQL. Built ETL applications for each data source to read, transform, and persist data to a Kafka topic. The RESTful service consumed the Kafka topic and persisted the medical observation data to MongoDB. Developed validation applications and scripts to ensure data integrity across source and downstream systems.

- Improved MongoDB query performance by implementing indexes, pagination, and projections.
- Fostered team collaboration and mentored developers to promote knowledge sharing and growth.
- Improved developer experience by documenting local setup procedures using Docker, reducing onboarding friction.

**Technologies:** Java (8.x), Kotlin (1.4.x), JSON, YAML, Spring Boot (2.3.x), Swagger (2.x), JUnit (5.x), Mockito (1.x), MongoDB (4.4.x), PostgreSQL (11.x), Redis (5.x), Kafka (2.1.x), Pivotal Cloud Foundry, Splunk, New Relic, Maven (3.x), Apache Tomcat (9.x), Git, IntelliJ IDEA, Jira, Confluence, GitHub, Jenkins, Docker

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## Best Buy

Richfield, MN

### Senior Software Engineer

May 2018 - May 2019

Joined as a consultant on BestBuy's DotCom e-commerce team, developing and maintaining RESTful backend services for shopping cart, taxes, product re-order, and address functionality. Diagnosed and resolved production issues using Splunk, Grafana, and profilers, collaborating closely with DevOps to ensure system stability. Led the development of new features and provided technical guidance on complex problems, following Kanban and Scrum practices.

- Upgraded core libraries and frameworks including Java, Groovy, Spring Boot, and Tomcat to address security vulnerabilities and reduce risk.
- Streamlined new developer onboarding, reducing setup time to 1-2 days.
- Mentored and guided team members on new technologies, fostering knowledge sharing and growth.

**Technologies:** Java (11.x), Groovy (2.5.x), SQL, CQL, JSON, Spring Boot (2.1.x), Spring Framework (5.x), Feign (10.x), Swagger (2.x), Spock (1.3), JUnit (4.x), Liquibase (3.x), Cassandra (3.x), MySQL (7.x), Memcached (1.5.x), Kafka (2.1.x), RabbitMQ, GCP Dataflow, Splunk, Grafana, Gradle (5.x), Maven (3.x), Apache Tomcat (9.x), Git, IntelliJ IDEA, Jira, Confluence, Bitbucket, Jenkins, JMeter, Docker, macOS

# Christopher J. Goeden

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## Room & Board

Golden Valley, MN

### Software Engineer

February 2017 – May 2018

Joined a team developing the company's next point of sale (POS) system, integrating with third-party systems such as SAP and Salesforce to aggregate data and deliver RESTful web services for the company's e-commerce website. Applied HATEOAS principles to provide greater flexibility with frontend technologies. Deployed scalable, highly available, and resilient services using Docker Swarm. Designed and executed the migration strategy from Redis Sentinel to a Redis Cluster with zero downtime.

- Identified and resolved security vulnerabilities within web applications, improving overall system security.
- Diagnosed and mitigated potential application issues through stress and load testing.
- Upgraded core libraries and frameworks including Tomcat and Java to address security vulnerabilities and reduce risk.

**Technologies:** Java (1.8), SQL, JSON, YAML, Spring Framework (4.x), Spring Boot (1.x), Spring WebMVC, Spring Data, Spring Security, JUnit (4.x), Mockito (2.x), Flyway (4.x), PostgreSQL (9.x), Redis (4.x), Docker, Swarm, Gradle (4.x), Apache Tomcat (8.5.x), Splunk, Git, IntelliJ IDEA, Jira, Confluence, Bitbucket, Bamboo, Wireshark, Gatling (2.3.x), Ubuntu (16.x), Redhat (7.x)

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## Federal Reserve Bank of Atlanta

Minneapolis, MN

### eBusiness Engineer III

July 2016 – February 2017

Led the rewrite of web reporting applications, architecting a strategy to modernize the application layer while maintaining compatibility with existing service and data layers. Refactored from service locators and singletons to dependency injection using Spring DI, improving maintainability and testability. Developed prototypes to demonstrate and train team members on JSF, accelerating adoption of new technologies.

- Improved team communication by organizing and facilitating Scrum meetings.
- Upgraded all frameworks and build tools, reducing technical debt and improving build reliability.
- Provided mentoring and guidance on technical decisions, fostering team growth and best practices.

**Technologies:** Java (1.7), SQL, HTML5, CSS3, JavaScript, XML, Spring Framework (4.x), Spring Web, Spring ORM, Hibernate (3.x), JUnit (4.x), EasyMock (3.x), MyFaces (2.x), jQuery (2.0), Log4j2 (2.x), Apache Commons Lang (3.x), Oracle DB, Maven (3.x), Jenkins, Subversion, IBM WAS (8.x)

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## Medtronic

Plymouth, MN

### Principal Software Engineer

May 2015 – July 2016

### Staff Software Engineer

November 2013 – May 2015

Led web technology development initiatives within the Minimally Invasive Technologies group, driving the conversion of desktop applications into web-based solutions with a focus on modeling, storing, and displaying large volumes of medical CT data. Built domain models and web services with Grails for storing and processing medical data in the DICOM format. Developed a medical CT viewer

# Christopher J. Goeden

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using the HTML5 canvas and the Cornerstone JavaScript framework, supporting 2D and 3D image rendering in a web browser. Implemented virtualization to create scalable and highly available services.

- Diagnosed and implemented a critical fix for the production hardware line, preventing costly downtime.
- Provided on-site hospital customer support, resolving DICOM/PACS issues for physicians and clinical staff.
- Collaborated with a small team of developers to research and prototype new web-based medical imaging technologies.

**Technologies:** Java (1.8), Groovy (2.3), SQL, HTML5, CSS3, JavaScript, XML, JSON, Regular Expressions, Grails (2.4), GORM, JUnit (4.x), jQuery, Cornerstone, VTK, DCM4CHE (3.x), DICOM (3.0), Guacamole, MongoDB, MySQL, ActiveMQ, Apache Tomcat (8.x), Git, IntelliJ IDEA, Jira, Confluence, Bitbucket, Wireshark, VirtualBox, Ubuntu

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## Jostens

### Senior Software Analyst

## Bloomington, MN

May 2012 – November 2013

Contributed to the rewrite and enhancement of an e-commerce application on an agile team. Developed a mobile-responsive payment application allowing users to make payments toward their remaining balance. Built a batch service to notify users via email of their outstanding monthly balance. Gathered requirements, created user stories, and published project timelines for smaller initiatives, bridging the gap between development and business stakeholders.

- Implemented a critical fix for third-party software to meet PCI compliance deadline, ensuring regulatory compliance.
- Integrated with third-party vendors via web services, expanding platform capabilities.
- Provided code reviews and contributed to design discussions, promoting code quality and best practices.

**Technologies:** Java (1.6), SQL, HTML, CSS, JavaScript, XML, Regular Expressions, Spring Framework (3.x), Spring WebMVC, Spring ORM, JPA, MyBatis, iBatis, JAXB, Jackson, Tiles, JSP, JSP Tag Libraries, jQuery, JUnit, Log4j, Apache Commons Lang, ASP, AS3, ATG, Cast Iron, SQL Server, Oracle DB, Apache Tomcat (6.x), Jenkins, Jira, Eclipse, IntelliJ IDEA, Subversion, YourKit, Ant

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## Pearson VUE

### Software Engineer

## Bloomington, MN

October 2006 – May 2012

Joined an 8-person team developing and maintaining a desktop-based exam delivery application that delivered client exams for candidate certification and licensure. Implemented features using the QTI exam model to define questions, sections, and scoring. Added new features including navigation, rescoring, and browser-based content delivery. Diagnosed candidate delivery and performance issues using profilers. Created custom client exam registration websites supporting candidate profile creation, exam selection, and exam date registration.

- Implemented automated deployment processes, reducing code deployment time from 6 minutes to 30 seconds.
- Redesigned outsourced software into reusable, maintainable code.

# Christopher J. Goeden

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- Recovered overdue project by identifying remaining tasks and proposing a revised delivery date.

**Technologies:** Java (1.6), Groovy, SQL, PL/SQL, HTML, CSS, JavaScript, XML, DTD, XPath, Regular Expressions, Spring Framework (3.x), Spring Web, JUnit (3.x), EasyMock, Log4j, JSF (1.2), Apache MyFaces (1.2), Facelets, Seam (2.0), Servlets, JSP, JSP Tag Libraries, jQuery, Swing, SAX, Jacozoom, SQL Server, Ant, Ivy, Apache Tomcat (6.x), TeamCity, IntelliJ IDEA, Perforce, YourKit, Enterprise Architect, ClearQuest

## Virtual Properties, Inc.

Madison, WI

### Graphical User Interface Developer

July 2004 - October 2006

Enhanced a web application providing custom multiple listing service (MLS) solutions for 100+ brokerages and their agents, offering customer relationship management (CRM), comparative market analysis (CMA), batch mailers, custom reporting, and real estate search capabilities. Each brokerage had a custom website integrated with the platform, enabling automated real estate searches and agent contact functionality.

- Rescued a struggling 3-year-old project by identifying roadblocks and rewriting requirements, recovering an estimated 3 months of lost progress.
- Researched, prototyped, and delivered graphical interface improvements, modernizing the application's user experience.
- Refactored 20+ contact forms to be maintainable and fully integrated with the CRM application, improving reliability and consistency.

**Technologies:** Java (1.3), PHP, HTML, CSS, JavaScript, XML, Servlets, JSP, JSP Tag Libraries, Sybase, Eclipse, Subversion, Debian

## Lands' End

Dodgeville, WI

### Help Desk Analyst Level 1

August 2003 - July 2004

Joined as a consultant providing first-level technical support for the entire company, resolving issues and routing complex problems to second-level support teams.

- Reduced average issue resolution time from 1 day to 1 hour by creating a streamlined process for an email help inbox.
- Contributed to an online technical knowledge base, documenting common issues and solutions to improve team efficiency.

**Technologies:** Assyst, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Outlook, Windows, macOS

## Education

**University of Minnesota** - Minneapolis, MN

Master of Science in Software Engineering, 2009 - GPA 3.5

**Saint Mary's University** - Winona, MN

Bachelor of Arts in Computer Engineering, 2003 - Dean's List 1999 & 2003, Member of Phi Mu Alpha