

# Christopher J. Goeden

## Summary

- Seasoned software development professional with over 20 years of experience in web and desktop applications.
- Demonstrated track record in delivering highly available, resilient, and scalable web applications.
- Strong focus on product quality through meticulous attention to detail and rigorous testing.
- Experienced troubleshooter with the ability to reproduce and resolve issues using technical expertise.
- Proficient in leveraging profilers to diagnose and address performance issues in systems.
- Committed to producing cost-effective and maintainable solutions within specified timelines.
- Avid learner, staying updated on new technologies through reading, conferences, and personal projects.
- Versatile in playing various roles, including lead, mentor, collaborator, business analyst, or project manager.

## Technical Expertise

<b>Languages</b>	<i>Java SE (21.x), Kotlin (2.x), Groovy (3.x), SQL, HTML5, CSS3, JavaScript, YAML, JSON, XML, Schema, DTD, XPath, Regular Expressions, Markdown</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>Frameworks</b>	<b>Spring:</b> <i>Spring Boot (3.x), Spring Framework (6.x), Security, OAuth, Web, Cloud, Data, Integration, Batch, Quartz, Actuator, HATEOAS</i> <b>Java:</b> <i>Swagger (3.x), OpenApi (3.x), Feign (10.x), resilience4j (1.7.x), JPA (3.x), Hibernate (6.x), MyBatis (3.x), Lombok (1.x), Flyway (6.x), Liquibase (4.x), Log4j2 (2.x), Apache Commons Lang (3.x), Apache Commons Collections (4.x), Apache CXF (4.x), JUnit (6.x), Mockito (5.x), Swing</i> <b>Groovy:</b> <i>Grails (6.x), Spock (2.4.x)</i> <b>Build:</b> <i>Gradle (8.x), SBT (1.x), Maven (3.x), Ant (1.10), Ivy</i>
<b>Tools</b>	<i>Docker, Kubernetes, Swarm, VirtualBox, IntelliJ IDEA, Eclipse, VSCode, Git, GitHub, Bitbucket, Subversion, Perforce, Postman, SoapUI, Azure Devops, Jenkins, TeamCity, Bamboo, Apache Tomcat (10.x), Apache HTTP Server (2.4.x), YourKit, Jira, Confluence, JMeter, Gatling, Splunk, New Relic, Datadog, Wireshark</i>
<b>Operating Systems</b>	<i>Linux (Debian, Ubuntu, Redhat), Windows, macOS</i>
<b>Middleware</b>	<i>Kafka, RabbitMQ</i>
<b>Databases</b>	<i>DynamoDB, MongoDB, Cassandra, Redis, Memcached, PostgreSQL, MySQL, Oracle, SQL Server</i>
<b>Cloud Providers</b>	<i>AWS, Azure, GCP, PCF</i>

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## Education

**University of Minnesota**, Minneapolis, MN  
M.S. Software Engineering, 2009 – GPA 3.5

**Saint Mary's University**, Winona, MN  
B.A. Computer Engineering, 2003 – Dean's List 1999 & 2003, Member of Phi Mu Alpha

## Professional Experience

**SmartThings, Minneapolis, MN**

**April 2024 – Present**

### Staff Software Engineer

Collaborated with a team of engineers on the development and maintenance of core authentication and authorization services, which were critical to the company's operations and platform stability. Contributed to the architecture and implementation of highly available and scalable distributed systems that managed substantial web traffic, consistently striving to achieve a 99.999% uptime target. Participated in the successful migration of critical data from Cassandra to Amazon DynamoDB, improving database performance, scalability, and operational efficiency.

- Enhanced application security by identifying and resolving key vulnerabilities and providing technical guidance to other teams to ensure secure coding practices.
- Contributed to continuous improvement by upgrading core libraries and frameworks across the application stack, reducing technical debt and improving performance.
- Demonstrated a strong focus on operational excellence by implementing cost-conscious solutions within AWS and optimizing logging and metrics to improve system observability and efficiency.

**Technologies:** Java (11, 17, 21), Spring Framework (6.x), Spring Boot (3.4.x), Spring Security, Spring Oauth, Spring Data, Spring Actuator, JUnit (6.x), Groovy (3.x), Grails (6.x), Spock (2.4.x), Scala (2.x), Akka, Cats, Cats Effect, Kotlin (2.x), kotest (5.x), mockk (1.x), Python (3.x), Apache Tomcat (10.x), DynamoDB, Cassandra, ElastiCache, Cloud & DevOps: AWS (EC2, Route 53, Secrets Manager), Terraform, Atlantis, Docker, Git, GitHub, GitHub Actions, Jenkins, Artifactory, Gradle (8.x), SBT (1.x), IntelliJ IDEA, VS Code, Jira, Confluence, SumoLogic, Datadog, Checkmarx, Artifactory Xray

**Pearson VUE, Bloomington, MN**

**September 2022 – April 2024**

### Software Product Architect

Guide a development team in migrating applications from on-premise to Azure. Conduct training sessions on best practices for creating highly available, resilient, and scalable applications. Design and deliver guidance on containerizing applications. Implement processes for proactive monitoring and alerting of application issues. Diagnose and address performance issues in applications utilizing

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profilers and query analyzers. Spearheaded the rearchitecture of a monolithic vendor fulfillment application into multiple microservices with asynchronous processing.

- Lead initiative to become FedRAMP compliant by providing process and solutions to security vulnerabilities.
- Provide high-level designs and estimates for large-scale initiatives, collaborating with cross-functional teams to define project scopes, technical requirements, and architectural considerations.
- Develop documentation outlining procedures for on-call support, ensuring clear guidelines, and protocols for team members to follow during support rotations.

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

**Pearson VUE, Bloomington, MN**

**July 2021 – September 2022**

## Lead Software Engineer

Led a team developing services/microservices that were used by web and desktop applications. Provided web services for payments, taxes, fraud checks, and vendor fulfillment. Upgraded, documented, and trained developers on the legacy ecommerce application. Rewrote legacy vendor fulfillment job to use modern technologies and processes. Promoted collaboration and team building while delivering on company initiatives on time. Enhanced CI pipeline to add PR builds to provide more feedback to the developers and to prevent a broken main branch.

- Enhanced developer onboarding by documenting machine setup, reducing setup time from one week to 1.5 days.
- Implemented a streamlined software launch process, reducing application startup time from approximately 1 minute to just 30 seconds.
- Introduced and championed team-building processes, including pairing, daily stand-ups, mentoring programs, and regular developer meetings.

**Technologies:** Java (1.8), Spring Framework (5.x), Spring Boot (2.2.x), JAX-RS, Jersey (2.x), Spring Data, Spring Security, SQL, SQL Server (2012.x), Liquibase (4.x), JSON, YAML, JUnit (5.x), Mockito (4.x), Gradle (6.x), Apache Tomcat (9.x), Apache MINA SSHd (2.x), IntelliJ IDEA, Git, VersionOne, Confluence, Bitbucket, TeamCity, (Dashboards / Alerts), New Relic, Docker, Azure (Vault, APIM, ACR, VMs)

**Daugherty Business Solutions, Bloomington, MN**

**May 2018 – July 2021**

## Software Engineer 3 / Senior Consultant

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- Collaborated with clients to provide expert guidance and strategic direction to ensure alignment with their business objectives and technological requirements.
- Showcased effective communication skills and adaptability in navigating diverse client environments.
- Conducted interviews for potential candidates, assessing technical skills and cultural fit.
- Managed consultants on their technical and consultant career paths, providing coaching on coding, design, and soft skills for software developers.
- Researched and delivered presentations on various technology topics for consultants.
- Instructed Daugherty University students in courses covering caching and unit testing.

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## **Express Scripts (Consultant - Daugherty), Edina, MN** **May 2020 – July 2021**

### **Senior Software Engineer, Entity Services**

Joined a team developed a restful service for accessing medical observation data. The medical data was provided by multiple data sources like DB2 and PostgreSQL. Wrote ETL applications for each data source to read, transform, and persist to a Kafka topic. The restful service read from the Kafka topic and persisted the medical observation data to a collection in MongoDB. Wrote applications and scripts to validate that the data from a data source was persisted correctly in MongoDB.

- Created an application to transform DB2 data and place it into a Kafka topic.
- Created an application to perform validations on data from the main source to the downstream source.
- Updated documentation on how to run all applications locally on a developer's machines using docker.

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

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## **Express Scripts (Consultant - Daugherty), Edina, MN** **May 2019 – February 2020**

### **Lead Software Engineer, Adjudication Platform**

Led a development team in a proof-of-concept project for rewriting the mainframe claim prescription adjudication application. Employed Scrum practices for efficient sprints and quick turnaround. Initially used a monolith architecture, later refactoring as needed. For instance, refactored the NCPDP lexer/scanner into a microservice for use by the monolith application and other business applications. Collaborated closely with the business to derive requirements from the existing legacy system.

- Created an EDI lexical analyzer and scanner for NCPDP to turn the data into a domain model.
- Guided the vision and architecture of the application.
- Trained and mentored new developers brought onto the team.
- Introduced Docker to help with developer environment setup.

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**Technologies:** Java (8.x), Lombok (1.x), Spring Boot (2.2.x), Swagger (3.x), PostgreSQL (11.x), MySQL (8.x), Flyway (6.x), Drools (5.x), Kafka (2.1.x), Redis (5.x), JSON, YML, JUnit (5.x), Mockito (3.x), Maven (3.x), Apache Tomcat (9.x), Pivotal Cloud Foundry, IntelliJ IDEA, YourKit, Git, Jira, Confluence, GitHub, Jenkins, Splunk, JMeter, Docker, macOS, NCPDP (D.0)

**Best Buy (Consultant - Daugherty), Richfield, MN**

**June 2018 – March 2019**

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## Software Engineer

Joined the DotCom business of BestBuy to work on their e-commerce systems. Worked on restful backend services that provided shopping cart, taxes, product re-order, and address services to the frontend teams. Troubleshot production issues using Splunk, profilers, and JMeter. Worked closely with DevOps to communicate and resolve issues. Used a Kanban board with Scrum practices to implement new features, library upgrades, and maintenance of services. Led the development of new functionality, provided technical advice, and tackled hard problems.

- Diagnosed and provided a solution to a production memory issue.
- Upgraded Java 1.8 to 11, Groovy 2.4 to 2.5 Spring Boot 1.x to 2.x, and Tomcat 8.0.x to 9.x.
- Mentored and guided team members on new technologies.
- Implemented processes to decrease new developer setup time.

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

**Room & Board, Golden Valley, MN**

**February 2017 – May 2018**

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## Software Engineer

Integrated with a team developing the company's next point of sale (POS) system. The POS system integrated with the company's existing SAP system while providing a better user experience. Developed RESTful web services for 3rd party application integration and e-commerce front-end. Used HATEOAS with the restful web services to provide greater flexibility with our front-end technologies. Utilized Docker and Swarm to create scalable, highly available, and resilient services. Developed and executed the migration strategy from a Redis Sentinel to a Cluster with minimal downtime.

- Identified and addressed security issues within web applications.
- Diagnosed potential application issues via stress and load testing.
- Upgraded Tomcat (7.x to 8.x), Java (1.8.x), and Redis from 2.x to 4.x.
- Developed tools for migrating Redis Sentinel data to a Redis cluster.

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

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**Federal Reserve Bank of Atlanta,  
Minneapolis, MN**

**July 2016 – February 2017**

## **eBusiness Engineer III**

Led the development in rewriting the web reporting applications. Architected a strategy for upgrading the application layer while still supporting the services and data layers (business requirements were to not change the other layers). Refactored from service locators and singletons to dependency injection using Spring DI. I chose to depart from this role prematurely as I found that the development environment and work-life balance did not align with my preferences.

- Created prototypes for demoing and teaching team members how to use JSF.
- Organized a scrum meeting to help communication issues within the team.
- Aggressively worked on upgrading all frameworks and builds tools.
- Provided mentoring and guidance on technical decisions.

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

**Medtronic - Interventional Lung Solutions,  
Plymouth, MN**

**November 2013 – July 2016**

## **Principal Software Engineer**

Led web technology development initiatives within the Minimally Invasive Technologies group while supporting existing software systems. Focused on researching ways to convert desktop applications into web-based ones, with a primary emphasis on modeling, storing, sending, and displaying large amounts of medical CT data. Utilized Grails to rapidly create domain models and web services for storing and processing medical data. Leveraged the HTML5 canvas and the JavaScript framework Cornerstone to develop a medical CT viewer for 2D and 3D images in a web browser.

- Leveraged virtualization to create scalable and highly available services.
- Diagnose and implement a crucial fix for the production hardware line.
- Provided on-site hospital-based customer support to currently released software systems.
- Troubleshooted DICOM / PACS issues for existing software.

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

**Jostens, Bloomington, MN**

**May 2012 – November 2013**

## **Senior Software Analyst**

Contributed to the rewrite and enhancements of their e-commerce applications on an agile team. Worked in a multitier architecture with application, service, and data layers. I contributed to the

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development of an application allowing users to make payments towards their remaining balance with a mobile responsive design. Created services to handle user transactions against a payment service and to update balance. Created a batch service to notify users via email of their remaining monthly balance. Acted as a Project Manager or Business Analyst for those smaller projects.

- Implemented a crucial fix for 3rd party software to meet PCI compliance deadline.
- Provided code reviews and contributed to design discussions.
- Successfully integrated with 3rd party vendors via web services.

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

## **Pearson VUE, Bloomington, MN**

**May 2011 – May 2012**

### **Software Engineer, Web Team**

Worked on creating custom exam registration websites for clients and developed services for business logic around exam registration. Refactored the client customization logic into a service to retrieve customizations from any location like a database, property files, or programmatically. Prototyped methods for extracting the team's software from the monolithic codebase to reduce build time, increase cohesion and decrease coupling.

- Implemented automated deployment processes, reducing code deployment time from 6 minutes to 30 seconds.
- Facilitated code reviews and book clubs to foster team growth and camaraderie.
- Mentored software developers, providing technical knowledge and leadership.

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

## **Pearson VUE, Bloomington, MN**

**October 2006 – May 2011**

### **Software Engineer, Test Delivery Team**

Contributed to the development of the exam delivery application for candidate certification and licensure. Implemented features in the test exam language using XML format, converting elements/attributes into a domain model for exam delivery. Utilized the exam domain model during delivery to determine the appropriate sections, questions, and timeouts to be presented to the candidate. Additionally, played a key role in various enhancements, including addressing timeouts, refining exam navigation, and improving the rescoring process for candidates' test results.

- Effectively redesigned outsourced software into code that is reusable and maintainable.
- Recovered overdue project by identifying remaining tasks and proposing a new delivery date.
- Created efficient processes for managing i18n and l10n.
- Mentored and trained new developers joining the team.

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**Technologies:** Java (1.6), Groovy, Spring Framework (3.x), JUnit (3.x), EasyMock, Ant, Ivy, Log4j, Swing, DTD, XML, SAX, Sax, Jacozoom, TeamCity, IntelliJ IDEA, Perforce, YourKit, Enterprise Architect, ClearQuest, XPath, Regular Expressions

**Virtual Properties, Inc., Madison,  
WI**

**July 2004 – October 2006**

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## Graphical User Interface Developer

Enhanced a web application that provided real estate brokerage management software solutions. For the brokerage and their agents, the application provided CRM, CMA, batch mailers, batch emails, custom reporting, and search queries for real estate. Each brokerage had their own custom website which had the ability to leverage the brokerage web application to provide real estate search queries, automated real estate searches, and contact the agent form.

- Redefined a struggling 3 year-old project by identifying roadblocks and rewriting requirements.
- Researched, prototyped, and proposed new graphical interface changes for the application.
- Successfully refactored all contact the agent forms to be maintainable and integrated with the CRM application.
- Mentored and guided developers with current software tools and best practices.

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

**Lands' End (Contractor - EXACTA),  
Dodgeville, WI**

**August 2003 – July 2004**

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## Help Desk Analyst Level 1

Worked on a team that provided first-level support for all technology related issues within the company. Collaborated with second-level support to route issues for further analysis to other support teams.

- Resolved first-level support issues in a fast-paced office environment.
- Reduced average time to issue resolution from 1 day to 1 hour by creating a process for an email help inbox.
- Created online technical documentation for a company support knowledge base.

**Technologies:** Assyst, Microsoft Office Suite, Windows, Mac