

# Amir Boroumand

Principal Software Engineer

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## TECHNICAL SKILLS

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Java | Spring Boot | REST API | Python | SQL | TypeScript | JavaScript | React | Postgres | MySQL | Microsoft SQL Server | Amazon AWS | Terraform | Redis | GitHub Actions | Kafka | Splunk | Liquibase

## WORK EXPERIENCE

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### Capital Technology Group (CTG) | Remote

May 2020 – Present

Principal Software Engineer (Nov 2023 - Present)

Senior Software Engineer (May 2020 - Nov 2023)

- Member of a technology modernization team at U.S. Citizenship and Immigration Services (USCIS).
- Develop and maintain the full-stack architecture for a national appointment scheduling system handling 2.5 million applicant appointments annually, used by 4,000 end users across 100+ field offices.
  - **Stack:** Java 17, Spring Boot 3.x, Hibernate, MyBatis, React, TypeScript, Postgres, Gradle, Linux, Docker, Kubernetes, AWS (EKS, RDS, S3, ElastiCache/Redis), GitHub Actions, Liquibase, Splunk
- Serve as technical lead on high-impact projects including interview case distribution which reduced nationwide appointment backlog by 15% and cut application processing times by 40%.
- Modernized legacy APIs to follow REST principles, implementing standardized error handling, OIDC/OAuth2 security, and response caching for improved reliability and performance.
- Proactively reduce technical debt by refactoring code, optimizing queries, and improving maintainability.
- Maintain 80% test coverage for both backend (JUnit) and frontend (React Testing Library & Jest), using SonarQube for static code analysis and code quality enforcement.
- Collaborate with the scrum master to refine product feature requests into actionable user stories and technical tasks, ensuring clear acceptance criteria and development roadmap.
- Led effort to implement API rate limiting to reduce the service disruptions caused by high request volumes.
- Containerized applications with Docker and deployed them to a Kubernetes cluster on AWS.
- Create and manage AWS resources using Terraform following Infrastructure as Code (IaC) principles.
- Migrated CI/CD pipelines from Jenkins to GitHub Actions, reducing build times and pipeline failures by 20%.
- Worked with multiple teams to migrate UI from AngularJS to React to improve maintainability.
- Assisted the team lead in migrating from Oracle to PostgreSQL to reduce licensing and support costs.
- Automated bulk actions with Python scripts, including appointment cancellations for weather events.
- Work in a remote distributed team following Agile development practices.

### Wesco | Pittsburgh, PA

Nov 2017 – May 2020

Software Engineer

- Backend Java development of buy.wesco.com which is a B2B eCommerce site offering over 1 million electrical, safety, and communications products generating over \$250 million annually.
  - **Stack:** Java 8, Spring Framework, SAP Hybris, Oracle Endeca, Apache, Tomcat, Microsoft SQL Server
- Collaborated with other developers, QA engineers, business analysts, and product owners in Agile environment
- Identified, debugged, and resolved complex production issues in a timely manner.
- Developed REST API endpoints for orders, quotes, addresses, payment methods, and shopping lists.
- Wrote and maintained unit tests to validate logic in the code using JUnit and Mockito.
- Interfaced with external web services for search, pricing, inventory, and order fulfillment using JSON and XML
- Used Spring Integration for triggering asynchronous backend tasks such as email notifications and data imports.
- Developed release dashboard that integrated with Atlassian Bamboo API to display build and deployment status across different environments eliminating manual status checks.
- Monitored application performance using tools such as Dynatrace and JMeter.
- Worked with the security team to maintain PCI compliance by addressing application security issues.

## Advanced Software Applications (ASA) | Bridgeville, PA

Feb 2017 - Nov 2017

Software Engineer

- Developed full-stack applications integrating machine learning models for predictions.
- Maintained legacy Java applications run by small banks and credit unions using JSP, JDBC, and Swing.
- Supported a C# desktop application for generating and scoring predictive models.

## Education Management Corporation (EDMC) | Pittsburgh, PA

Jul 2012 – Feb 2017

Systems Administrator III (Oct 2013 - Feb 2017)

Systems Administrator II (Jul 2012 - Oct 2013)

- Implemented, configured, and supported enterprise reporting and integration servers on RHEL 6/7 and Windows Server 2008/2012 R2.
- Served as Linux subject matter expert across systems administration teams.
- Developed Perl scripts that handled automated file transfers for multiple business units.
- Built an automation solution processing 10K+ daily calls, ensuring compliance by routing outbound call recordings to a third-party for speech analytics.
- Provided Tier 3 production support, troubleshooting, analyzing, testing, and resolving issues.
- Supported enterprise data warehouse running SQL Server 2012/SSIS/SSAS for business intelligence.
- Extended datacenter services with cloud solutions on Amazon Web Services (AWS) platform.
- Reduced IT access management tickets by 15% with single sign-on (SSO) solution for Linux systems.
- Followed ITIL framework for incident, problem, and change management using ServiceNow platform.

## EDUCATION

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### Drexel University

2003 - 2005

Master of Science (M.S.), Information Systems

Philadelphia, PA

### Penn State University

1999 - 2002

Bachelor of Science (B.S.), Computer Science

University Park, PA

## CERTIFICATIONS

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### AWS Certified Solutions Architect - Professional

Issued: **December 2020** | **Active** (Validation number: J70WB8QBLMBEQK9K)

### HashiCorp Certified Terraform Associate

Issued: **March 2024** | **Active** (Certificate number: 6f95323f-939e-46f8-b938-4d5dc62f5d28)

### Pivotal Certified Spring Professional

Issued: **July 2020** | **Active** (Credential ID: 447232)

## PERSONAL PROJECTS

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### Steel City Time Machine – iOS App (Available on the App Store)

- An iOS app built with Swift that lets users explore the history of Pittsburgh.
- Decoupled data updates from app releases by storing historical event and image data in an S3 bucket.

### Safe Content AI – NSFW Image Detection API (Available on GitHub)

- A content moderation API for detecting NSFW images, built with Python.
- Integrated an image detection AI model to classify images with high accuracy.

### STSproxy – AWS STS Authentication Proxy (Available on GitHub)

- Developed an API that provisions temporary cloud credentials for third-party vendors using AWS STS.
- Implemented role-based access control (RBAC) and bcrypt password hashing to enforce security best practices.