

William P Farrell, CISSP

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Cloud Engineer / Architect

Project Oversight | Operations Stewardship | Vision & Strategy

Professional Summary

Experienced software engineer with the ability to adapt and use different technologies to effectively write interfaces and process data efficiently. Maintains excellent written and verbal communication skills often used in working with other departments and external clients and vendors to communicate advancements in code. Possesses design skills that have used to implement new products and features throughout the length of the product development lifecycle. Integral in streamlining and refining processes, boosting productivity, and implementing solutions. Successfully manages and addresses coding errors. Is well versed in using advanced query tools, Oracle SQL databases, and other technical tools to manage, adjust and interpret data. Proficient at configuring web applications and streamlining automated tools. Ability to adapt to new technology including cloud technology, containerization and microservices. Experienced in test driven development including creating feature files and test cases. Additional skills include:

- **Successful at** developing proofs of concept , evaluating current code, and creating alternative solutions when errors occur.
- **Proficient at working** within the SDLC and communicating with Quality assurance testers, business analysts, project managers, and technical writers.
- **Working with teams of** highly skilled developers to interpret, manage, and design solutions that meet the customers' needs.
- **Building and leading relationships across teams for** cohesive and strategic business systems initiatives.
- **Strategic in managing business roles to** ensure the smooth transactions of operational functions.
- **Provided leadership, planning, software architecture direction and oversight** for development activities to achieve modernization outcomes.
- **Leveraged design standards and best practices** to minimize redundancy, maximize reusability, maximize use of authoritative data, and enhance the user experience through navigation and accessibility consistency.
- **Established or maintained a governance process** to ensure accurate and effective use of software coding standards across the entirety of the application.

Core Competencies

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|---------------|-----------------|----------------------|
| ▪ AWS | ▪ Redux | ▪ Jira |
| ▪ Java | ▪ Angular | ▪ CloudFoundry |
| ▪ CSS | ▪ Query Tools | ▪ Bootstrap |
| ▪ Java Script | ▪ NoSQL & MySQL | ▪ Postgres |
| ▪ JQuery | ▪ BitBucket | ▪ Agile Design |
| ▪ React | ▪ Git | ▪ NIST SP500-83 |
| ▪ Python | ▪ Python | ▪ REST/SOAP Services |
| ▪ CI/CD | ▪ Kubernetes | ▪ Terraform |

Languages

Worked with Java, Python, Bash and Powershell scripting, JavaScript, HTML5.0, XML, CSS, JQuery, React, Redux, Angular

Additionally:

- Worked with Appian, PHP, Delphi, and Ant.

Software

Databases include Oracle, PL/SQL, Cassandra, NoSQL, MySQL, Postgres, MongoDB

Additional Platforms:

- Used Unix Shell, Microsoft Windows 7, and XP.

Tools

Java testing tools including junit, Cucumber, Selenium.

Python testing tools including pytest, moto, and localstack

CI/CD tools include Docker, Kubernetes, GitLab CI, Jenkins, AWS CloudFormation and CodeCommit

Additional Tools Include:

- Used Rational Suite, Advanced Query Tool and Oracle SQL Developer, Eclipse, Maven, PgAdmin.
- Assisted with BitBucket, Git, Jira, and CloudFoundry.

Architecture

Java and J2EE and EJBs, MVC and MVP, Angular frameworks, JSP, JSF, Spring, and Struts, Axis, GWT and GXT, and Bootstrap.

Certifications

AWS Certified Solutions Architect – Professional (expires 09/26)

AWS Certified DevOps Engineer– Professional (expires 02/27)

AWS Certified Security Specialty (expires 10/25)

AWS Certified Solutions Architect - Associate (expires 09/26)

AWS Certified Developer - Associate (expires 02/27)

AWS Certified Cloud Practitioner (expires 06/26)

CompTIA Security+ (expires 01/27)

(ISC)2 CISSP – expires 04/28

Active Public Trust and current Secret clearance(last active 02/28/2023)

Work Experience

Cloud Architect/ CloudSoftware Engineer, March 2023 – Present. GAMA-1 Technologies

Cloud engineer on NOAA contract to make satellite data more available to public on Cloud through CI/CD and containerization, Cloud Architect on NWS support contract to automate existing NWS applications

Additional Roles:

- Created RDS Postgres (PostGIS) database using Terraform to store wildfire detection data.. Created and stored database passwords in Secrets Manager and parameters in Paramter store. Created application level users and their associated grants/roles.
- Deployed Python{AWS Lambda on EKS cluster to populate Postgres (PostGIS) database of wildfire detections..
- Wrote unit and integration tests using pytest, moto, and localstack..
- CI/CD was accomplished through the use of GitLab runners that would validate/test/deploy.
- Implemented ElasticSearch for a Metadata application on Kubernetes and produced IAC artifacts including Docker images stored in ECR..
- Helped convert NASA Metadata application to AWS including creating MongoDB database in full Gitlab CI/CD deployment.
- Member of modernization team attempting to make weather data more accessible to the public including first responders.
- As NWS Cloud Architect, instituted AWS Tagging governance, defined Change and Configuration Managements procedures and provided 24x7 support for cloud applications.
- Addressed AWS Security Hub findings to stay compliant with RMF NIST SP500-83. Reviewed Nessus scan results.
- Created new RFC(Request For Change) process to streamline existing change control process and provide better metrics.
- Implemented AWS WAF (Web Application Firewall) across multiple applications and accounts using standard, customized and rate-based rules. Created central OpenSearch dashboard for visualizarions.
- Migrated several existing applications from on-premises to cloud.

- Moved existing monitoring lambdas from CodeCommit to GitLab and fully automated their deployment using GitLab CI/CD.

Senior Software Engineer, December, 2021 – February 2023. BigBear.ai

Full-stack cleared developer working on DOD contract to convert existing system to low-code platform in AWS GovCloud

Additional Roles:

- Helped formulate system requirements and interpret business requirements. This involved working with multiple client personnel at various levels to ensure software design of this modernization effort was correctly planned.
- Instituted unit testing requirements for code changes and established code reviews to ensure best practices were followed..
- Consult with other government agencies to assess common data requirements and write APIs accordingly..
- Document best practices for code promotion to Beta environment.
- Assist cloud architect with AWS architecture decisions and SAML authentication of Department of Defense CAC.
- Used eMASS to remediate STIGs and keep IL2/IL4 environment in line with DoD Zero Trust and NIST SP500-83 frameworks.
- Work with DBA to determine database requirements and assist with modeling
- Designed screen layouts to match requirements and worked with both Appian and the client to maximize the user experience.
- Created Appian process models(work flows) to dictate interreaction with database entities and user interfaces.
- Worked with Junior developer (including paired programming) to ensure he was productive and contributing to the project success.
- Became the go-to developer to troubleshoot problems with the application whether in terms of process errors, deployment issues or database questions.

Senior Software Engineer, July, 2021 – December 2021. Prime Technical Services

Back-end developer working on DCSA contract to convert existing system to AWS GovCloud. Wrote new Java Lambda functions. Created CloudFormation event scheduler stacks and API Gateway.

Additional Roles:

- Performed integration testing to ensure end-to-end data flow was consistent with specs.
- Developed Java Spring Boot emulator APIs to mimic external datasources(NNCP and DNI).
- Created postgres schemas in PgAdmin for testing with Lambda functions.
- Was integral part of team modernizing DCSA background investigation process and moving to AWS GovCloud.
- Documented procedures for newly formed team of developers. Was a leader in establishing standards and best practices.
- Attended in-person PI planning with management and client to properly assess future PI goals.

Senior Software Engineer, May 2018 – June, 2021. Andromeda Systems

Full-stack Java developer working on the inventory system for defense industry. Created new screens in GWT, Bootstrap, and CSS. Works in an Agile environment. Task were created using test-driven development methodology with Cucumber and Selenium.

Additional Roles:

- Assists with back-end service code was written using Rest framework and connected to Oracle databases. Java code was enhanced with Java 8 functional programming of streams, forEach, and lambdas.
- The environment was automated to use Bitbucket auto-builds with Jenkins. Branches were created and tied to Jira sub-tasks.
- Was member of team that modernized repair process for US Navy FA-18. The WISK (Work-in-progress Inventory Storage and Kitting) software is currently in production at multiple Navy repair centers. Software interacts with large mechanical storage system, affects other systems like Parts, and replaces computerized and manual systems.
- Establishes processes for analysts testing new features and documented existing processes and technical tasks,
- Works as liaison between remote developers and on-site analysts and managers. Attends biweekly product review meeting with senior management to provide technical insight.

Senior Java Developer, January 2018 – May 2018, JP Morgan Chase (Consultant)

Created new mortgage onboarding product for major lender.

Additional Roles:

- Was the design lead responsible for creating Cassandra databases in response to product design.
- In a leadership role, coordinated agile tasks between onsite team members and offshore teams and kept roughly 25 people working towards common goal.
- Created both front-end React and redux modules and accompanying Java microservices using Rest API.
- Established coding standards and best practices for both front and back end. Instituted code reviews.
- Produced cloud-based proof of concepts in both Angular and React using npm and CloudFoundry.

Senior Web Developer. 1998 – May 2017. Black Knight Financial

Developed customer facing pages in Customer CareNet application using GWT,Bootstrap, CSS/GSS and LESS/SASS preprocessors.

Additional Roles:

- Changed styling and branding layouts to meet individual client specifications.
- Ensured that the UI is mobile compliant (WCAAG standards). This included text alternatives for images and color contrast checks. Tested general appearance when screen resized through Responsive Design Mode.
- Wrote server-side Java code to consume web service output and formulate AJAX response using Spring MVC framework. Also composed the client-side GWT views using this AJAX output.
- Created new features for web application which involved writing specifications, designing EJBs, creating Java classes and making back-end SQL calls.
- Worked with Oracle databases including creating stored procs, complex queries, and materialized views. Produced multi-step client database installs including DDL/DML.
- Developed third party links to external vendors that require encryption routines (AES and SHA-256) to pass NPI. These links involved back end Java code to send/receive secure.
- Worked with HTTP posts. Roles involved evaluating security risk, error handling and debugging.
- Assisted with deploying the application using IBM WebSphere and created thru Rational suite, most recently Rational Team Concert using Eclipse Base. Version control included ClearCase and RTC. Partially involved with the automated testing of this application which was carried out thru Junit
- Worked on an older version of product included creating and updating Java EJB's, JSP and servlets.
- Collaborated on proof of concept using JSF.
- Assisted with developing Java Web Services using - SOAP, WSDL and developing DTDs, XSD schemas for XML including the process of parsing, processing, and design. Web service involved the Axis framework and was used as middleware by front-end applications to communicate with mainframe.

Education

BA, Computer Science. LaSalle University. Philadelphia, PA