Matthew Curtner

Software Engineer

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LinkedIn | **Github** | **Portfolio**

Software test engineer with 12 years professional programming experience in developing, designing, and delivering innovative IT solutions to meet ever-changing project/business requirements. Leadership, skills, and knowledge refined during the last 12 years in the aeronautical information industry. Expert in developing and implementing software development strategies/user-focused web applications with a range of technologies and programming languages. Possesses an ability to architect reliable, performant, and scalable IT solutions. Equipped with extensive understanding of learning models and object-oriented concepts.

Areas of Expertise

- Project Management
- Software Engineering
- Test Automation Frameworks
- Continuous Integration/Continuous Deployment

- ICAO Standards
- Software Development Lifecycle
- Agile/Scrum Methodology
- AIXM

- Debugging & Analysis
- Test Strategy & Planning
- Team Training & Leadership
- Quality Assurance & Control

Technical Proficiencies

| ICAO | AIXM 5.1 | Java |Spring, JPA | Hibernate | REST | SOAP | C# | Jenkins | Docker | Swift | Objective-C | HTML, CSS, Angular | PL/SQL | Selenium | Cucumber | Javascript | Typescript | XML | .NET | Python | IntelliJ Idea | Maven | Browserstack |API Testing | Agile | Scrum |

Career Experience

Frequentis AG   **2019 – Present**
QA Software Automation Test Manager

Unified aeronautical information management through the delivery and exchange of meticulously verified digital aeronautical data. Implemented Java behavior-driven testing framework into multiple diverse software engineering initiatives, spanning entire project scopes and cross-functional team collaboration. Design, develop, and maintain robust and scalable code to facilitate continuous integration and regression testing. Lead comprehensive software development protocols, encompassing debugging proficiency and adept management of defects. Collaborate with development teams and stakeholders to ensure successful release of premium software products.

- Architected implementation of custom BDD testing framework using Intellij, Java, Selenium and Cucumber/Gherkin
- Ensured Digital NOTAM event creation adheres to AIXM 5.1.1 standards while fulfilling product requirements
- Facilitated that system requirements adhered to the OPADD (Operating Procedures AIS Dynamic Data) requirements
- Verify adherence to the GML 3.2.1 compliance schema via geography requirements
- Partnered with project managers and engineers to translate concepts into tangible products for clients and stakeholders
- Lead and facilitate company-wide initiatives such as technical system testing best practices
- Provide leadership within development through close collaboration, knowledge shares, and mentorship
- Active participant of a Scrum team utilizing Agile methodology

Frequentis AG   **2013 – 2019**
Software Automation Engineer

Utilized Java/J2EE technologies to architect, design, and engineer testing for AIM applications within client/server environments. Instructed and educated developers and quality assurance team members in the implementation of automation programs and streamlined processes. Conducted regular performance reviews to identify skill development opportunities and promote culture of learning and growth. Monitored test results, analyzed defects, and provided timely feedback analysis.

- Established automated testing procedures for multiple integrated AIM (Aeronautical Information Management) systems

- Provided guidance regarding ICAO, Digital NOTAM, AIXM 5.1, and OPADD adherence

- Participated in code reviews and contributed to the development of coding standards and guidelines

- Utilized pertinent AIM domain expertise to provide specifications, program changes, unit test scripts, and documentation

- Assisted programming modifications throughout quality assurance, user acceptance testing, and post-implementation phases.

- Identified and enhanced code inefficiencies, resulting in a 38% enhancement in application stability

- Implemented automated front-end and API testing

Frequentis AG   **2011 – 2013**
Test & Documentation Engineer

Developed and oversaw automated testing protocols utilizing data driven testing frameworks for ICAO NOTAM, Flight planning, and SDO (Static Data Office) applications. Executed TestComplete automated test cases to validate software functionality, performance, security, and compliance to ICAO standards. Implemented comprehensive system integration and acceptance tests to validate software performance. Created and maintained comprehensive technical documentation, including test cases, procedures, and user manuals.

- Ensured adherence to ICAO NOTAM, Pre-Flight Briefing, and METEO reporting standards.

- Developed and executed TestComplete automated test scripts to verify software compliance and functionality against ICAO 4444 standards.

- Deployed distributed web and mobile testing capabilities using Browserstack

- Crafted and updated user training materials while collaborating with product owners on refining test plans and scripts.

- Performed hands-on and exploratory testing to confirm both functional and non-functional requirements."

- Executed quality assurance tests across multiple systems to verify AIM product compatibility and responsiveness

Additional Experience

ZENworks NTS Support | Novell
Customer Software Support | PolicyTech

Education

Bachelor of Science in Computer Information Technology
Brigham Young University - Idaho - Rexburg, ID

Certifications

Certified ScrumMaster® (CSM®) Scrum Alliance, Inc.
Badge: 654495

Signature Projects

Flight Planning Software for Eurocontrol | Orchestrated the implementation of an extensive test suite of flight planning tools using TestComplete, encompassing ICAO Pre-Flight Briefing, Flight Planning, NOTAM and METEO reports. Significantly streamlined testing operations and heightened overall efficiency for product deployment to Eurocontrol, a pivotal Aeronautical Data provider in Europe.

Internet Briefing System | Led testing development of a web and mobile application empowering private pilots to seamlessly liaise and coordinate flight plans with aviation authorities (ATC) prior to takeoff. Revolutionized the interaction between pilots and aviation authorities, facilitating efficient pre-flight management, including weather-related adjustments. Successfully deployed in Austria, Portugal, The Netherlands, and Great Britain.

Digital NOTAM Web Portal | Manage testing lifecycle of an ongoing development of a robust web portal that empowers ATC data originators to efficiently manage critical information related to Airports and Airways. Ensured compliance with AIXM5.1.1 standards and elevating data precision, safety, and regulatory adherence. First deployment with Qatar, serving as a paradigm for enhanced safety and operational efficiency.

CATS (Continuous Acceptance Testing Schema) | Innovated project testing with an in-house testing framework utilizing Behavior Driven Development principles and the Cucumber/Gherkin language. Pioneered a comprehensive UI/REST test project, providing exhaustive coverage of 98% of user interfaces and REST APIs. Built upon the Selenium framework, seamlessly integrating Webdriver and Page Object Model/Page Object Factory for precise testing of interface mappings.

IOS App Projects

SplitDegrees | Gesture-driven temperature conversion app
Resistor Colors Calc | Resistance calculation tool for resistors.
Ohm's Law - Calculator for electrical components and Ohm's Law.
Intonation Plus - Guitar and Bass tuner app.
Pocket Networker - Subnet calculation tool for IP ranges.