Claire Renee Thompson

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Detail-oriented computer engineer with 15 years experience in both embedded software and web development. Strengths are optimizing legacy code for accuracy and efficiency; simplifying complicated procedures; developing processes and patterns for consistent and readable code. Not afraid to dive into an unfamiliar methodology or technology.

Education

University of Kansas Lawrence, KS

* Bachelor of Science in Computer Engineering December 2004

Computer Engineering Skill Sets

* **Programming:** C#; Java; Python; .Net; C++; C; Groovy; Scheme; Lua; Visual Basic; Assembly; proprietary languages; device drivers; web applications; console applications
* **Remote Teamwork** Microsoft Teams; Zoom; GoToMeeting; Agile Sprints; Horizon VM; Remote Desktop; TeamViewer
* **IDEs:** Eclipse; Microsoft Visual Studio; IntelliJ
* **Bug and Feature Tracking:** GitHub; Redmine; Spiceworks; Jira; Confluence; ZOHO; Azure;
* **Version Control:** Git; Mercurial; Subversion; TortoiseSVN; Team Foundation Server
* **Continuous Integration:** Maven; Gradle; Jenkins; Nexus; Ancible; Spock; nuget; Team City; Octopus Deploy
* **Operating Systems:** Windows; Linux
* **Software Engineering:** System Analysis & Design; UML; functional requirements; rapid prototyping; bug tracking and troubleshooting; root cause analysis; documentation; release planning; full software life-cycle; Object-Oriented Design; Model-View-Controller (MVC)
* **Database:** Oracle SQL; MySQL; PL/SQL; DB2; Oracle SQL Developer; Microsoft SQL Server; RavenDB; SQL Server Integration Services (SSIS); Extract Transform Load (ETL) layer; indexes; stored procedures; query optimization
* **Computer Engineering:** computer architecture; VHDL modeling and simulation; compiler construction
* **Automated Testing:** RF test equipment; report generation; implement manufacturer-defined tests; develop test criteria from requirements; debug software and hardware; error insertion; design and verify interface adapters; regression testing; customer training and support
* **RF Testing:** power supply; RF power meter; spectrum analyzer; audio analyzer; audio generator; RF generator; oscilloscope; multimeter; programmable digital I/Os; open collectors; serial I/Os
* **Comm Standards:** RS-232; RS-422; MIL-STD-1553; HaveQuick ECCM
* **Military Radios:** ARC-164; ARC-186; ARC-222; ARC-231; ARC-232

Work and Project Experience

Astronics Test Systems – *Applications Engineer* **Orlando, FL Hybrid Remote/Travel July 2020 - April 2023**

- Develop hardware and software necessary to perform functional and diagnostic testing on various electrical assemblies
- Write embedded software to utilize instruments on the Astronics desktop and handheld test stations, including the following types of equipment: power supply, RF power meter, spectrum analyzer, audio analyzer, audio generator, RF generator, oscilloscope, multimeter, programmable digital I/Os, open collectors, serial I/Os, MIL-STD-1553 controller
- Work contributed to company being down-selected by US Army for TS-4549/T radio test set program
- Understand and capture customer requirements and create new designs to meet project needs
- Perform analysis on technical documentation, schematics, and Unit Under Test (UUT) behavior to understand the functionality of the UUT and to determine test requirements and limitations
- Design physical interface adapters to connect the UUT input/output (I/O) to the test station I/O; this requires generation of an electrical schematic or wire list, confirming physical connections of prototypes, and debugging as necessary
- Implement test requirements by configuring proper instrument and UUT settings, applying input signals to the UUT, and verifying the corresponding expected outputs
- Generate object oriented software in C# using Microsoft Visual Studio 2019
- Perform troubleshooting and root-cause analysis as required to determine failure conditions and engineer solutions
- Utilize revision control software TortoiseSVN for all software source files and document data
- Report system bugs and request system features using Redmine project management software
- Perform software validation and verification testing
- Support other engineers through sharing specialized knowledge, debugging, brainstorming, and code reviews
- Carry out documentation and software development while working remotely
- Travel to office location in Orlando, FL to complete hardware integration and debugging
- Use Microsoft Teams for remote meetings and presentations

Brandon Associates – *Software Developer* **Farmingdale, NY Remote Contract March 2017 - April 2020**

- Create and update web portal for medical insurance client, with interactive features for health providers and insurance members
- Collaborate long-distance projects with Brandon Associates located in NY and client located in NY, while based in Wichita, KS
- Communicate with team and client regularly to clarify requirements and provide status updates
- Use Microsoft Teams, Zoom, and Go-to-Meeting for remote presentations
- Log into remote client servers using Horizon VM, Remote Desktop, and TeamViewer
- Write .Net and C# applications for the web and console in Microsoft Visual Studio 2015 and 2017
- Implement features based on Functional Requirement Documents (FRDs) and communications with client
- Build automated unit tests for requirements to protect against accidental error introduction in future development
- Develop and maintain ETL (Export, Transform, Load) processes to update client data from multiple databases to the web site
- Coordinate code changes, feature branches, and versioning with teammates using Team Foundation Server
- Manage automated deployment pipeline using TeamCity and Octopus Deploy to produce consistent deployment packages
- Communicate with client's Quality Assurance team to troubleshoot errors prior to final deployment
- Document deployment instructions in Release Planning Worksheet (RPW) for client to execute on production servers
- Track projects using Microsoft Azure KanBan boards to keep team up-to-date with status and estimated completion dates
- Cross-train with other team members to support multiple projects and clients as needed

The Golf Warehouse – *Java Developer for E-Commerce* **Wichita, KS May 2012 - July 2016**

- Back-end web development for retail web site, including implementing 3rd party tags, batch order processing, and uploading product information using Amazon and other 3rd party data formats
- Design and implement Java Spring web services (SOAP and REST) on Windows and Linux to expose application data
- Deploy website and backend updates as scheduled during low-traffic hours in order to minimize inconvenience to customers
- Troubleshoot and debug customer bug reports, providing a better user experience; make corrections using Java and JavaScript
- Prioritize projects, estimate project timelines, and participate in Agile Sprint meetings
- Design and implement Java applications to integrate existing ERP with new Web Platform for smooth transition, minimal downtime
- Write SQL queries and provide web data for business analysis as required, languages include Oracle SQL, PL/SQL, and DB2
- Participate in on-call rotation to provide 24-7 website and E-Commerce support
- Design and automate product data and inventory feeds to match external partner data requirements; implemented in Java SE
- Monitor and correct data errors in support of marketing efforts – product listing ads, email promotions, commissioned affiliates
- Automate processing of marketplace orders (Amazon and eBay) – download and submit orders, generate and upload acknowledgement, adjustment, and fulfillment messages in return; all applications implemented in Java SE
- Design, implement, and perform load testing on the site to ensure optimal performance during high-traffic times such as Black Friday
- Perform regression testing prior to code deployments
- Build Spock unit tests for new applications, reducing effort for regression testing and building confidence in application performance
- Manage project imports and versions using Maven, Gradle, Nexus, and Jenkins; manage code deployments using Ancible scripts

Aeroflex – ***Software Engineer*** **Wichita, KS Nov 2005 - Sept 2011**

Develop new automated tests for military radios on an all-in-one measurement test set
Write embedded software in proprietary coding language TMAC
Build device drivers in C to control registers involved in sending signals between test set and radio
Review test reports and user emails to troubleshoot and debug legacy code, finding solutions to customers' problems
Research version control history to determine reasons for past changes and pinpoint introductions of software errors
Troubleshoot and debug faulty equipment using schematics to guarantee test accuracy; multimeter, oscilloscope, logic analyzers
Review hardware and communication specifications to efficiently design, verify, and test new interface cables
Consult with manufacturers to understand and modify test criteria, supporting multiple hardware configurations for the customer
Regression test new software, preventing new errors from being delivered
Document Automated Test Procedures, guiding customers how to verify and validate new software
Travel to customer bases to support verification testing and train users on the equipment
Work in a team to design requirements for a new automated testing platform, including database design for tests and result storage
Implement new framework in Python

Senior Design Lab – ***Award-Winning True-3D Display System*** **University of Kansas Lawrence, KS Spring 2004**

Collaborated with classmates to produce design for a True-3D display system and a thorough demonstration of its functionality
Synchronize CRT oscilloscope display with rotation of external motor to project 3D image onto rotating fan blades
Utilize geographical elevation data to create sample 3D image of mountains
Spearheaded software development for project, implementing features such as translation, magnification, and rotation
Coordinated with team to test, revise, and present project, receiving the Rummer Design Award for the best semester project