

# William Claytor

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Authorized to work in the US for any employer

## Links:

<http://billclaytor.com/>  
<https://github.com/wclaytor>  
<https://www.linkedin.com/in/billclaytor/>

## Summary:

I am a Senior Software Engineer with 25 years of industry experience in software development, test automation, and quality assurance.

## Specialties:

### Software Development:

Certified in Java and .NET web development, with more recent experience in Ruby, JavaScript, and Python

### Test Automation:

Extensive experience in unit, integration, API, user interface, and performance testing using a variety of enterprise and open-source tools and frameworks

### Quality Assurance:

Proven track record managing and leading QA teams, implementing QA processes in every phase of the SDLC, and creating, managing, and executing comprehensive test plans

## Work Experience:

### Senior QA Engineer and QA Manager

Active911  
Corvallis, OR  
03/2020 – 07/2022

Active911 helps heroes save lives with software designed to get first responders on scene faster with fast alerting, easy scheduling and more.

As a Senior QA Engineer:

- Established a comprehensive QA process for the ActiveAlert and ActiveTeam web, Android, and iOS applications for all phases of the SDLC
- Implemented a Nightwatch.js test project using the Page Object Model to develop a library of reusable modules shared by a suite of end-to-end test scripts
- Used TestRail to create and organize test cases mapped to application requirements in Jira
- Used Jenkins Job DSL to automatically build and synchronize a test automation dashboard to manage test execution and update test status in real time via the TestRail API
- Created targeted test plans to test individual feature request and defect tickets in isolation, as well as comprehensive test plans to test release candidates and production deployments
- Performed manual testing of all test cases not yet covered by test automation
- Participated in design review sessions to evaluate upcoming application changes for potential quality / testability issues

As a QA Manager:

- Led the hiring effort to expand the QA team resulting in multiple successful hires including identifying, mentoring, and promoting current employees from the Customer Support team
- Led the daily QA team standup and weekly team meetings
- Mentored team members in all aspects of QA and test automation

- Conducted regular one-on-one meetings with team members to spend focused time on individual issues and needs
- Conducted quarterly review meetings with team members to reflect upon the previous quarter, complete the formal review process, and set goals for the upcoming quarter
- Worked with product managers and developers during backlog review to address quality / testability issues
- Worked with product managers to coordinate and support user acceptance testing (UAT)

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### **Senior Software Engineer**

Puppet  
Portland, OR  
01/2018 – 03/2020

Puppet is the industry-leading automation solution for configuration management, compliance, CI/CD, patch management, IT automation, and more.

As a member of the System Level Validation (SLV) team:

- Executed performance testing for Puppet Enterprise releases including scale, soak, and release comparison tests using gatling-puppet-load-test (GPLT), an in-house developed framework which utilizes Gatling (an open-source load and performance testing tool) and Beaker (a Ruby-based Puppet test harness)
- Enhanced the GPLT framework with features such as scale testing support, automated HTML performance comparison report generation, system tuning via the pe\_tune module, extraction and parsing of JSON-based pe\_tune and puppet\_metrics\_collector data for inclusion in performance reports, and extensive unit test coverage with RSpec
- Developed a Ruby-based utility allowing the GPLT framework to provision infrastructure nodes via the Puppet ABS API, managing JSON-based requests and responses and exporting configuration data via YAML
- Provisioned and maintained Linux-based test execution environments using the AWS and Platform 9 cloud platforms
- Assisted in the development of the Ruby-based Reference Architecture Setup (RAS) command-line application used to install and configure Puppet Enterprise based on supported reference architectures using Puppet Bolt for remote command execution, including Docker-based acceptance tests and full unit test coverage via RSpec
- Participated in the Reference Architectures Working Group with members of the SLV, Customer Success, Installer, and PuppetDB teams focused on the definition and enhancement of Puppet Enterprise reference architectures, review of performance test results, and the roadmap for the SLV team's performance testing activities

As Scrum Master for the Installer and SLV teams

- Coordinated Scrum activities including daily standup, sprint retrospectives, sprint planning, backlog grooming, and brainstorming sessions
- Worked with Product Owners and team members to establish the team's implementation of the Puppet Operating Model, ensure adherence to the agreed-upon implementation, and make necessary adjustments to the implementation as-needed
- Participated in the Puppet Agile Community of Practice to share experiences and learn from experienced practitioners

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### **Senior Quality Engineer**

National Public Radio  
Washington, DC  
05/2014 – 01/2018

NPR is an independent, nonprofit media organization that was founded on a mission to create a more informed public.

As a member of the Publishing team:

Lead the effort to evaluate multiple JavaScript-based automation frameworks to integrate test automation into JavaScript projects

- Implemented a Nightwatch.js test project within the Seamus codebase with support for cross-platform / cross-

browser testing in multiple environments

- Automated test cases for the overhaul of the Seamus CMS (using React / Redux) Used Jenkins Job DSL to automatically build and synchronize a test management dashboard
- Integrated the Nightwatch.js tests with the Seamus CI process

As a member of the TechOps team

- Created a hybrid (keyword-driven / data-driven) test automation framework in Java using Selenium Webdriver
- Updated the existing NPR API test suite with a modular approach to improve efficiency and reliability, developed additional tests for new API endpoints, and performed ongoing maintenance and bug fixes including analysis and validation of JSON data
- Updated the existing test infrastructure to use Jenkins as a test management dashboard Automated test cases for multiple products with a cross-platform / cross-browser approach
- Worked with the TechOps developer and system administrators to manage the Jenkins test automation instance
- Created a web-based test suite documentation tool using Node.js / Express and React / Redux

As a member of the NPR One team

- Updated the in-house automation framework to use Appium for Android and iOS testing Automated test cases using a cross-platform approach
- Worked with the QA Specialist and mobile developers to automate the test build process
- Set up and maintained the mobile testing infrastructure using Jenkins nodes with the iOS Simulator and Android emulator

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### **QA Automation Manager**

American Public University System

Charles Town, WV

03/2012 – 05/2014

American Public University System (APUS) is an online university system with its headquarters in Charles Town, West Virginia.

- Planned the QA Automation team schedule based on project timelines and resource availability
- Lead the recruiting effort for the QA Automation Engineer and QA Automation Specialist positions
- Trained and mentored team members in the use of test automation tools and frameworks, programming languages and development environments, system functionality, and organizational processes and procedures
- Designed and developed a data-driven, keyword-based, object-oriented test automation framework using Microsoft .NET / C# with Coded UI and Selenium
- Implemented an Agile-based workflow for managing the QA Automation team workload using HP ALM / Quality Center
- Designed and developed an object-oriented, data-driven back-end test automation framework using Microsoft .NET / C# to verify student registration and payment transactions
- Performed automated smoke and regression testing during all phases of development to verify build integrity, system functionality, and environment stability
- Participated in design reviews, requirements reviews, and test plan reviews to gain insight into system functionality and testing strategy and provide feedback based on automation needs and concerns
- Worked closely with business stakeholders, developers and testers to increase the visibility and use of test automation throughout the organization

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### **Lead QA Analyst**

FINRA

Rockville, MD

09/200 – 03/2012

FINRA enables investors and firms to participate in the market with confidence by safeguarding its integrity.

- Provided full life-cycle testing of Web CRD (the central licensing and registration system for the U.S. securities industry and its regulators), IAPD (Investment Adviser Public Disclosure site) and other related applications

- Developed and maintained the existing WinRunner test automation framework, including significant improvements in dependency management facilitating use for multiple AUTs, releases and environments
- Designed and developed a multi-tiered, data-driven, keyword-based test automation framework with dynamic Descriptive Programming in QTP / VBScript using Excel spreadsheets for test abstraction and data parameterization, allowing testers with no programming / automation experience to create, execute and maintain tests
- Implemented a requirements based test automation development process with Agile best practices using HP Quality Center for requirements traceability, test organization and defect management
- Implemented a Continuous Integration process for automated test execution using CruiseControl, Hudson, Ant, VSS and wget
- Worked closely with business stakeholders, developers and testers to increase the visibility and use of the test automation platform throughout the organization

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### **Test Automation Specialist**

Fannie Mae  
Washington, DC  
09/2002 – 09/2003

Fannie Mae was chartered by U.S. Congress in 1938 to provide a reliable source of affordable mortgage financing across the country.

- Provided full life-cycle testing of multiple in-house mortgage processing applications Developed a WinRunner test automation framework with user-defined functions to encapsulate business actions
- Developed a LoadRunner automation process allowing tests to be used in the internal or HVU (hosted virtual user) environments
- Administered the TestDirector server, including configuration of SQL Server, IIS, project database management, project creation, test and requirement creation and organization, and control of user access to test projects
- Created and executed automated test cases based on and mapped to system requirements Reported and tracked system defects using PVCS Tracker and coordinated with the development team to resolve system issues

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### **Test Automation Specialist**

MedContrax  
Gaithersburg, MD  
01/2001 – 02/2002

MedContrax was a software company based in Rockville, Maryland, providing data processing and integration services to the healthcare industry.

- Provided full life-cycle testing of the MedContrax Contract Processing Network, a web based pharmaceutical contract management / data processing application (ColdFusion / SQL Server)
- Administered the Quality Control test environment, including installation and configuration of the operating system (Windows NT Server), COTS (SQL Server / IIS / ColdFusion / Ubizen MultiSecure ETS), installation of application software releases, user access to QC test system, network monitoring and log analysis
- Administered the TestDirector server, including configuration of SQL Server, IIS, project database management, project creation, test and requirement creation and organization, and control of user access to test projects
- Created and executed manual and automated test cases based on and mapped to system requirements
- Developed a WinRunner automated testing framework with custom reusable functions mapped to application features allowing rapid test development
- Reported and tracked system defects using Kemma Software BridgeTrak and coordinated with the development team to resolve issues

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## **Test Automation Specialist**

US Census Bureau  
Suitland, MD  
09/1998 – 01/2001

The Census Bureau's mission is to serve as the nation's leading provider of quality data about its people and economy.

- Managed the automated testing of multiple data collection and processing applications with the Mercury Interactive TestSuite (WinRunner, LoadRunner, and TestDirector)
- Administered the TestDirector project server and database
- Conducted performance test engineering including determining key transactions, creating and maintaining LoadRunner test scripts, and executing performance test scenarios utilizing the LoadRunner Controller
- Designed and implemented an interactive test results intranet site using Windows 2000 Server / IIS Conducted testing for Y2K compliance issues, methodology development and implementation, and developed automated testing procedures utilizing the Mercury Interactive TestSuite
- Participated in Joint Application Development sessions with various divisions within the Census Bureau as a representative of the Technologies Management Office's software testing division

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## **Education:**

### **Towson University**

English  
Towson, MD  
1992 – 1994

### **St. Mary's College of Maryland**

English, General  
St. Mary's City, MD  
1991 – 1992

### **Harford Community College**

English, General  
Churchville, MD  
1990 – 1991

## **Skills:**

Ruby (5 years)  
JavaScript (10+ years)  
Java (5 years)  
C# / .NET (3 years)  
PHP (5 years)  
Python (3 years)  
HTML (10+ years)  
SQL (10+ years)  
Linux (10+ years)  
Nightwatch.js (6 years)  
Cypress (1 year)  
Playwright (1 year)  
Selenium (9 years)  
Appium (5 years)  
RSpec (5 years)  
Minitest (1 year)  
JUnit (1 year)

Gatling (2 years)  
Quality assurance (10+ years)  
Github Issues (3 years)  
TestRail (3 years)  
Jenkins (10+ years)  
Puppet (3 years)  
AWS (5 years)  
Docker (5 years)  
Git (9 years)  
Github Actions (1 year)  
Dokku (1 year)  
Heroku (3 years)  
Agile (10+ years)  
Test automation (10+ years)  
SDLC (10+ years)  
Software testing (10+ years)  
CI/CD (10+ years)  
Software development (10+ years)  
Test cases (10+ years)  
DevOps (7 years)  
Scripting (10+ years)  
Continuous integration (10+ years)  
Performance testing (10+ years)  
OOP (10+ years)  
Test-driven development (5 years)  
Software troubleshooting (10+ years)  
Functional testing (10+ years)  
Integration testing (10+ years)  
Unit testing (10+ years)  
Mobile testing (5 years)  
System testing (10+ years)  
User acceptance testing (10+ years)  
Test management tools (10+ years)  
Software deployment (10+ years)  
Software quality assurance (10+ years)  
Build automation (10+ years)  
Project management (10+ years)  
QA/QC (10+ years)  
Management (5 years)