Jeremiah LaRocco

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Summary

Software engineer seeking full-time employment in the western United States, or remote.

Experience

Anark **January 2022 - Present**

Software Engineer

- I work on Anark Workstation, which imports and processes CAD files from different systems (Catia, NX, Creo, etc.) and publishes the processed data (models, imagery, attributes, etc.) to Anark Collaborate for sharing and PDF for offline publishing.
- I refactored our Catia importer using C++/CLI and the Spatial Interop libraries to get more accurate import results with better performance.
- I worked on a project to replace the OpenGL renderer in Anark Workstation with the WebGL renderer from Anark Collaborate. This used the Chromium Embedded Framework (CEF) and CefSharp to share the renderer between desktop and web applications. I was responsible for performance tuning and optimizing the Javascript interface to the renderer, as well as generally helping out.
- I've worked on several smaller features, including adding hyperlink support to Anark Core XML (used to bind user defined attributes to CAD data), and improvements to our Process Planning tools.
- I've also fixed other bugs as necessary, including in the other CAD importers, with our Collaborate integration, and general bugs in the software.

Thermopylae Sciences and Technology **December 2018 - June 2021**

Software Engineer

- Worked on the Google Earth Enterprise Platform (GEEP), a collection of value added products and services based on the open source Google Earth Enterprise (OpenGEE) software.
- Helped implement the Panoramic Management microservice and designed its functional test framework using Python, Flask, GDAL, and PostGIS.
- Implemented and benchmarked a plugin for storing Google Earth data natively in S3 using the AWS C++ SDK, though it wasn't released.
- Added support for triangulated irregular network (TIN) terrain data to the GEEP ATAK plugin using the Java-based ATAK plugin SDK, JNI, and C++.
- Assisted DevOps with our CI pipelines, using several AWS services (S3, EC2, CodeBuild, etc.), Gradle, Jenkins, and Docker
- Helped with manual and automated testing.

NetApp (formerly SolidFire) **July 2013 - November 2018**

Software Engineer

- Worked on the Element software that controls SolidFire storage systems; a large distributed system running on Linux, written in C++ with Boost.
- Responsible for refactoring, and then maintaining, the drive management sub-system, which keeps track of drives and controls the services associated with them.
- Worked on smaller features and enhancements, including improvements to fault detection, API improvements, and hardware monitoring.
- I helped start the short-lived White Box Testing Team, which added the Recorder sub-system for structured (JSON) logging.
- Used valgrind, Coverity, and coverage tools to improve code quality and kill bugs.

Spatial Corporation **March 2009 - June 2013**
Software Engineer

- Worked on the Interop translation portion of the then new CATIA Geometric Modeller (CGM) based product. Used C++, Python and Scheme for test generation.
- Used Agile development in the Productivity and Tools group to develop the internal "TestCenter" web application. Used Java, JSP, JUnit, MySQL and Tomcat.
- Maintained the "Quality Checker" (QC) component of TestCenter in C++.
- Participated in a "team room" with Interop developers to develop the beta release of the CGM Writer component.
- Participated in a "team room" with ACIS developers to develop of new CGM componenent.

L3 Communications **May 2007 - October 2008**
Software Engineer

- Initially I worked in the "DBA Group", developing a web interface for creating, verifying, and managing Unique Identifier (UID) labels.
- Took over development of the internal DBA website.
- Created a C++ application for hand-held bar code scanners to communicate with existing inventory management system.
- Volunteered for, and eventually moved to, a "Systems" development position, writing Jovial and x86 assembly language for the Automated Remote Tracking Station Software (ARTS).
- Assisted with maintenance and deployment of ARTS at customer sites.

The Library Corporation **March 2007 - May 2007**
Software Engineer

- Maintained 1.5 million lines of C++ code using DCE RPC, Oracle 10g, and Solaris for the server portion of the CarlX library management system.
- Used Ruby to automate testing and bug reproduction.

Verizon Business **March 2006 - February 2007**
Application Developer

- Developed, debugged, and performed QA on call routing applications for Verizon's Next Generation Service Network (NGSN).

Carmichael Training Systems **February 2004 - March 2006**
Junior Programmer

Education

University of Colorado At Colorado Springs **2000-2004**

Received Bachelor of Science in Computer Science with minor in Economics

Open Source

In my free time I work on a number of open source projects which are available on GitHub and SourceHut. Most are small personal projects, but I've also made many contributions to other projects, including st-json, a popular Common Lisp JSON library, and OpenGEE, the open source version of Google Earth Enterprise.

References

Available upon request.