Jeremiah LaRocco

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Summary

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

Experience

Anark

Boulder, CO (hybrid) **January 2022 - Present**

Tech Lead/Software Engineer, CAD Translation

- As technical lead for the CAD Translation team I coordinate with project management, QA, support, and other stakeholders to coordinate and track features and bugs, and prioritize incoming work for the team.
- I mainly work on Anark Workstation (AW), a Windows application that imports and processes CAD models (Catia, NX, Creo, etc.), allowing the user to add animations, process plans, annotations, notes, etc. and then publish to the Anark Collaborate (AC) web platform and 3D PDF.
- I refactored the Catia importer - using C++/CLI and the Spatial Interop libraries - to get more accurate import results with better performance.
- I assisted on a project to replace AW's OpenGL renderer with the WebGL renderer from AC using the Chromium Embedded Framework. I worked on performance tuning and optimizing the Javascript interface to the renderer, as well as fixing bugs.
- I've worked on several smaller features in both AW and AC, including upgrades to 3rd party libraries and improvements to our process planning tools.
- Tools used include WPF, ReSharper, C#, C++, C++/CLI, Docker, and Typescript.

Thermopylae Sciences and Technology

Boulder, CO (fully remote) **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. Tools used include GDAL, libTiff, libJpeg, PostGIS, and Apache.
- 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.
- 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

NetApp (formerly SolidFire)

Boulder, CO (fully remote) **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 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
Boulder, CO (fully remote) **March 2009 - June 2013**
Software Engineer

- Worked on Interop translation for the CATIA Geometric Modeller (CGM) product. Used C++, Python and Scheme for test generation, on Windows and Linux.
- Helped write the first version of the 3DScript Windows application, which is used to demo features of the Interop and CGM libraries.
- 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
Boulder, CO (fully remote) **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.
- 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**
Boulder, CO (hybrid)
Software Engineer

- Maintenance on a large C++ codebase running on Solaris and using Oracle database.

Verizon Business **March 2006 - February 2007**
Boulder, CO (hybrid)
Application Developer

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

Carmichael Training Systems
Colorado Springs, CO **February 2004 - March 2006**
Junior Programmer

Education

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

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.