Dane T. Larsen

705 North St, Boulder CO, 80304
(303) 725-3982 - dane.t.larsen@gmail.com
larsendt.com

EDUCATION

2008 - 2013 – B.S. Computer Science, University of Colorado Boulder
2013 - 2015 – M.S. Computer Science, University of Colorado Boulder

EXPERIENCE

Student Software Engineer, Laboratory for Atmospheric and Space Physics
Spring 2010 to Spring 2015, Boulder CO

I worked as a student software developer on a project to replace the OASIS-CC spacecraft command and control front-end with a modern Qt4-based suite of applications. OASIS-CC is a NASA class B certified (suitable for critical non-human spaceflight) suite of support software that is used in daily operations of four* spacecraft at LASP.

See `http://lasp.colorado.edu/oasis/oasis.html`

I also worked on an OpenGL-based scientific visualization tool for the MESSENGER mission to Mercury. I was also the sole developer for a web-based event countdown clock for daily spacecraft operations used by six NASA missions.

* This number has likely increased since I was there.

Software Lead, Aerospace Graduate Projects at CU Boulder
Fall 2013 to Spring 2014, Boulder CO

I was the software lead for a NASA/National Space Grant Foundation funded project as part of a Graduate Project for the CU Aerospace Department. The project (X-Hab), involved designing and building a prototype system for providing edible plants for long duration extra-terrestrial exploration missions. The goal of the system was to minimize astronaut effort in the growth and maintenance of their food production systems. The system was personally delivered to and presented at the NASA Kennedy Space Center in Summer 2014.

See `http://www.nasa.gov/exploration/technology/deep_space_habitat/xhab/`

Software Engineer, CenturyLink Cognilytics
June 2015 to March 2016, Denver CO

I worked on a project using CenturyLink security data to build a more intelligent threat analysis system using machine learning and other intelligent methods.

Software Engineer (Contractor), NDP LLC
Fall 2015, Boulder CO

I am also currently working part time on a system for translating multiple disparate satellite data protocols into a common format in real time for aggregation and analysis.

Software Engineer, Google
March 2016 to Present, Boulder CO

Currently doing full-stack development for the Google Payments team.

SKILLS

As a student programmer at LASP, I worked on a number of very different projects, sometimes in a team, sometimes solo. I was exposed to low-level TCP/IP operations in C++, GUI design in Qt, scientific data visualization in OpenGL, front-end and back-end web development, projects with strict scope and deadlines as well as open-ended no-timeline projects that depended nearly solely on my decisions. This level of variety has continued in the other areas of my professional life. I'm using Hadoop, Spark and machine learning techniques on massive quantities of data, while simultaneously working in low-level C++ on performance-sensitive networking code.

I'm happy as a full stack developer. I like thorough tests, comprehensive documentation and version control. I'm comfortable debugging high level JavaScript and low-level C. I'm fascinated by automation and machine learning. I know how to read academic research papers. I'm savvy with the command line, and I like Linux enough to run it on both of my personal computers.

Languages

- Python (2.x and 3.x) - fluent, 7+ years of experience
- C++ - semi-fluent, 4 years of experience with gaps
- JavaScript - semi-fluent, one complete project for LASP
- Java - semi-fluent, mostly used at Google
- Bash - comfortable, used in a number of work and personal projects
- SQL (mostly SQLite) - used in a number of projects

Miscellaneous

- Git - lots of experience, both work and personal
- Linux (Ubuntu/Debian, RedHat) - lots of experience, both work and personal
- OpenGL - took two classes, and did a number of personal projects, familiar with the modern standards (3.x and 4.x)
- Networking - familiar with the concepts of the TCP/IP stack and standard APIs
- Machine learning - the focus of my Master's degree. Took several classes and did a number of projects

Possibly Relevant Hobbies

- Electronics - I know how to solder and what most basic electronic components do. I'm interested in the intesection of machine learning and embedded electronics.
- CNC - I have a small CNC machine (X-Carve), and I have a small amount of self-taught CAD knowledge.