Dane T. Larsen

6325 Trevarton Dr.
Longmont, CO 80503
(303) 725-3982
larsendt.com
github.com/larsendt

EDUCATION

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

EXPERIENCE

Undergraduate Research Assistant
Laboratory for Atmospheric and Space Physics
Spring 2010 - Spring 2013
Boulder, CO

Worked as a student software developer on a project to replace the OASIS-CC spacecraft command and control front-end with a modern Qt4 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`

Graduate Research Assistant
Laboratory for Atmospheric and Space Physics
Spring 2013 - Present
Boulder, CO

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

Software Developer
ChemaTox Laboratory Inc.
Summer 2013
Boulder, CO

Worked on Racket-based software to automate processes for forensic toxicology operations.

Software Lead
Aerospace Graduate Projects
Fall 2013 - Spring 2014
CU Boulder

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/`

SKILLS

Extensive experience with

- System administration for Linux (Ubuntu, Debian, RedHat)
- Python (2.x and 3.x)
- C
- C++
- Embedded programming with the Arduino, PCDuino, BeagleBone and Raspberry PI
- The Git DVCS
- Work in a "devops" style environment

Experience with

- OpenGL
- OpenCL
- Machine learning techniques and processes including
  - SVMs, Decision Trees/Random Forests, Probabilistic Graphical Models
- The Rust language
- The Racket language
- Java
- JavaScript
- Sh/Bash scripting
- Networking protocols and software including
  - HTTP and web frameworks
  - TCP/IP and C-style socket programming

Self-taught

- Soldering
- Designing simple circuits
- Integrating off-the-shelf electronics components into simple circuits