Dane T. Larsen

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EDUCATION

2008 - 2013 – B.S. Computer Science, University of Colorado Boulder
2013 - Present – 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 suite of support software that is used in daily operations of five spacecraft, including the Mars-orbiting MAVEN satellite. See http://lasp.colorado.edu/oasis/oasis.html

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

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

COMPUTER SKILLS

Extensive experience with Linux (Ubuntu, Debian, RedHat)
Extensive experience with Python (2.x and 3.x)
Extensive experience with C and C++
Experience with the Rust language
Experience with the Racket language
Experience with several machine learning techniques, including probabilistic classification models, support vector machines, decision trees and random forests
Extensive experience with embedded programming on the Arduino, PCDuino, BeagleBone and other low-cost embedded systems
Extensive experience with the Git and Subversion version control systems