

PROFESSIONAL EXPERIENCE

NASA Langley Research Center – Flight Software Systems Branch Intern - C++
Summer 2014

- Contributed to the design and implementation of real-time flight avionics software for Shields-1, a CubeSat designed to quantify the radiation mitigating properties of various materials in a geotransfer orbit.
- Wrote code to schedule the retrieval of radiation data from sensors, control of the spacecraft's attitude, communication to the ground station, and the reliable handling of system upsets and failures.

GradFly - Software Engineer - Python

Winter 2013 – August 2014

- Member of four person engineering team building platform for technical students to collaborate on projects, showcase accomplishments, and be recruited by schools and employers.
- Implemented backend software for beta product that reliably handled load from three schools.

NASA Langley Research Center - Safety Critical Avionics Systems Branch Intern – Java, C

Summer 2013

- Contributed to a component of CertWare, an open source tool designed for avionics engineers to validate the reliability of their system designs.
- Component allows engineers to model system reliability using the Structured Assurance Case Metamodel standard.

OTHER PROJECTS

Rover – Software Engineer – Python, C++

Spring 2014

- Built a wireless rover capable of receiving commands to traverse an area, raise an American flag, and send images to an operator's laptop.
- Built in 24 hours with three other students at UB Hacking 2014 at University at Buffalo, won "Coolest Hack" award.

University at Buffalo Nanosatellite Program – Lead Software Engineer – C++, Python

Fall 2013 – Present

- Leading a team in the design and implementation of a software system for GLADOS, a student built CubeSat designed to track orbital debris from a low earth orbit using near-infrared imaging.
- Wrote and tested multiple large pieces of software, including a library of flight hardware drivers, high-level mission software, and a graphical, internet-accessible ground station.

WhiteBoarder – Vision and Interface Developer – Python

Fall 2013

- Wrote code to convert drawings of data structures into actual representations in memory using OpenCV.
- Completed at HackPrinceton 2013 at Princeton University.

Scribbler – Android Developer – Java, Python

Fall 2013

- Developed Android application allowing users to chat anonymously with the people located right around them.
- Completed in 24 hours at MHacks 2013 at University of Michigan, reliably handled 50+ users' conversations at demo session.

SmartBus – Lead Vision Developer– C++

Spring 2013

- Wrote code to optimize the University at Buffalo's bus system by prioritizing stops based on numbers of passengers waiting and passengers onboard.
- Completed in 24 hours at UB Hacking 2013 at University at Buffalo.

EDUCATION

University at Buffalo – Computer Engineering – 3.6 GPA

Class of 2016

- Provost Scholarship Recipient
- Advanced Honors Scholar
- Students for the Exploration and Development of Space (SEDS)
- Outdoor Adventure Club