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# John Dulin

## Experience

May 2014 - August 2014 **Software Developer Intern** *Tlon*, San Francisco, CA.
- Built the first full-stack web applications of the functional Urbit OS.
- Wrote some of the first excellent developer documentation of Urbit and Hoon.
- Contributed to the standard library and documentation of the functional systems language Hoon.

May 2013 - August 2013 **Software Developer Intern** *Sociagram*, Cleveland, OH.
- Built the first versions of the Python, Java, and Android client SDKs for the FrameStack asynchronous video-messaging RestAPI with full unittest and JUnit testing suites.
- Built several Android applications demonstrating the FrameStack Android Library.

March 2012 - August 2012 **Robotics Research Intern** *Air Force Research Lab*, Dayton, OH.
- Designed, programmed, and presented a self-determined research project with the NAO robot to have it navigate a room, find objects, and pick them up. Used the Python NAOqi SDK to write applications in Python combining decision-making, movement, and control.

May 2012 - May 2013 **Google Student Ambassador** *Google*, Cleveland, OH.
- Organized events on CWRU's campus to promote Google products, brands, and relationships in collaboration with Google marketing teams.

October 2011 - May 2012 **Programmer** *CWRU School of Medicine Genetics Lab*, Cleveland, OH.
- Built scripts in Python, R, and bash to manipulate DNA base sequences for cancer research.

## Skills

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|---|---|---|---|
| Languages | Python, Java, Haskell, Hoon, C++ | Hobbies | Javascript, PHP, C |
| Platforms | Linux, Android, ROS, NAOqi, Urbit, AWS | DB | MySQL, PostgreSQL |
| Tools | Bash, catkin, Git, LaTeX, Scipy | Frameworks | Django, Python unittest, JUnit |

Physics lab experience with experimental statistics, electronic test equipment (Oscilloscopes, multimeters, PMTs, etc.), and lab safety. Linux command line fluency.

## Education

2011-2015 **Physics, B.A., Minor in Computer Science**
*Case Western Reserve University*, May 2015.
**Relevent Courses:** Programming in Java, Data Structures, Algorithms, Compilers, Logic Design, AI for Robotics (Udacity), Machine Learning (Udacity), Statistical Mechanics, Linear Algebra, Abstract Algebra, Real Analysis, Complex Analysis, Discrete Mathematics.

## Projects

**Senior Thesis** Contributed to an experimental search for the shape of the universe by solving for the eigenmodes of the Laplacian of the universe for a set of oblique torus topologies and building numerical tools in Python to simulate correlation matrices of the Cosmic Microwave Background radiation under Prof. Glenn Starkman.

**EECS 397** A crash course in building ROS applications and packages for Atlas to solve the challenges of the DARPA Robotics Challenge.

**Winthrop** Scheme interpreter written in Haskell using combinatory parsing with Parsec. Functionally handled mutable state, I/O, and parsing.

## Activities and Interests

**ACM** Vice President (2013-2014), Secretary (2012-2013), and Treasurer (2011-2012). Organized the reformation of ACM at CWRU, hackathons and trips to hackathons, and helped start the annual Link-State Conference.

**Hackers Society** Maintainer of the CWRU Hackers Society student group, which presents weekly tech talks, programming workshops, and connects students to a network of employers.

**FIRST Robotics** President, Founder, and coder of FIRST FRC Team 3652. Personally fundraised over $9,000 in sponsorships. Managed 16 students and 3 adult mentors while overseeing the successful design of robot hardware and software.