John Dulin

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Experience

September 2015 - present

Software Developer *OnShift*, Cleveland, OH.
- Responsible for the full-stack development of a web application using Flask and React.js to configure periodically scheduled Celery jobs for client data transfers.
- Ported legacy Python 2 modules and Turbogears endpoints to Python 3 and Flask Views in OnShift's scheduling application.
- Implemented features for client-facing infrastructure to download, transform, and integrate new customer punch card and employee schedule data.

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 REST API with full unittest and JUnit testing suites.
- Built several demo 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 navigate a room, find objects, and grasp them. Used the Python NAOqi SDK to write applications in Python combining perception, navigation, and control.

October 2011 - May 2012

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

Skills

Languages	Python, Javascript, C++/C, Java, Hoon, Scala, Haskell (Most to least experienced)

Platforms	Linux, ROS, Android, NAOqi, Urbit, AWS	Databases	PostgreSQL, SQLAlchemy ORM, MySQL
Tools	Git, bash, webpack, npm, catkin, LaTeX	Frameworks	Flask, React.js + Redux.js, Backbone.js, JQuery

Physics lab experience with experimental statistics, electronic test equipment (Oscilloscopes, multimeters, PMTs, etc.), and lab safety. Linux command line and HTML/CSS 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, E&M, Quantum Mechanics I&II, General Relativity, Particle & Nuclear Physics, Advanced Physics Lab, 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.

Elevator Simulator
A Scala command line application to simulate an elevator system with an arbitrary number of lifts and floors. Uses the SCAN algorithm to efficiently service randomly generated ride requests.

EECS 397
A crash course in ROS application and package development to solve the challenges of the DARPA Robotics Challenge. Built C++ ROS apps in Gazebo to solve various DRC problems for BD's Atlas humanoid robot.

ML Class
Completed the Udacity online courses "AI for Robotics" and "Machine Learning" by Sebastian Thrun.

Winthrop
Scheme interpreter written in Haskell using combinatory parsing with Parsec.

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 Former 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.