Lawson Fulton

1600 15th St. #619, San Francisco, CA, 94103

628-222-9094 - <u>lawsonfulton@gmail.com</u> <u>lawsonfulton.com</u> - <u>github.com/zero-impact</u>

EDUCATION

University of Waterloo

September 2010 - April 2015

B.Math, Honours Computer Science – Co-op (With Distinction)

Nanjing University of Aeronautics and Astronautics

September 2012 – December 2012

International Study Exchange, Software Engineering

WORK EXPERIENCE

Dropbox - Teams Platform

August 2015 - present

Software Engineer

San Francisco, CA

- · Developed new features for Dropbox teams within an extensive existing codebase using Python and Coffeescript.
- · Extended functionality for Dropbox groups to include join requests, and discoverability.
- · Implemented and executed A/B tests to determine impact of potential changes to team creation flow.
- · Collaborated with PMs and designers to write and refine feature specs before and during the development process.
- Ensured the reliability of all new features with extensive unit and integration testing.

Autodesk Research - *Bio/Nano/Programmable Matter Group* Software Developer Intern

April 2014 - December 2014

San Francisco, CA

- Led the design and implementation of a back-end replacement for the deprecated Autodesk 123D plugin used for 3D modelling in the browser. Leveraged Javascript and WebGL to render scenes that were generated on the back-end with Python and Autodesk modelling libraries.
- · Co-led a research project for the development 3D bioprinting techniques through collaboration with internal and external scientists. Developed techniques for post-processing slice images using Python.
- · Created a Javascript webapp for doing 3D/Bio Printing on Cyborg, our platform for app development.
- · Designed and implemented a security solution for isolation of arbitrary user-written Python code using Docker Linux Containers.
- · Coordinated with external universities and companies to define future research efforts and collaborations.

LinkedIn - *Data Analytics Infrastructure Team* Software Engineer Intern

August 2013 - December 2013

Mountain View, CA

- · Reduced request latency by 50% through research and implementation of bitmap based columnar database indexes within an in-house developed database with Java.
- · Performed extensive analysis and comparisons of different indexing techniques using R and Java, resulting in accurate predictions of real world performance.
- · Developed a system for routing queries in a distributed analytics system using Java and Netty.

Research Software Developer

Shanghai, China

- · Improved the design and performance of distributed computing platform, built during previous internship (See April 2012), through collaboration and on-ramping of new Shanghai team members.
- · Acted as coordinator between Toronto and Shanghai teams, and ultimately bringing the project to a higher level of exposure inside the organization by showcasing our work to multiple teams.
- · Redesigned a serial Python mathematical optimization package to run on our distributed platform.
- Took on the responsibility of a research sub-project involving the use of genetic evolutionary algorithms to explore applications of design optimization in the cloud.
- · Created documentation and getting-started guides for developers and users of the platform.
- · Worked largely autonomously of Toronto-based supervisor.

University of Waterloo - Center for Theoretical Neuroscience Research Assistant - Computational Neuroscience Group

May 2013 - August 2013

Waterloo, ON

- · Improved execution time of a core GPGPU algorithm for the Nengo neural simulator by over 10 times using OpenCL.
- · Demonstrated time management skills by participating part-time alongside intensive full-time school work.

Autodesk Research - High Performance Computing Group

April 2012 - August 2012

Software Developer

Toronto, ON

- · Built, and assisted in the design of, a prototype distributed computing platform for running and dynamically scaling massively parallel mathematical optimization algorithms. Made with Python, Amazon Web Services (EC2, SQS, S3) and Redis.
- · Collaborated with internal and external clients to satisfy their cloud computing needs while improving the cloud-platform prototype.
- · Implemented and applied distributed optimization algorithms such as Differential Evolution in Python.

Autodesk Research - Research Transfer Group

April 2011 - August 2011

Software Developer

Toronto, ON

- · Finished the design and implementation of a new, and more programmer-friendly, C++ API for the <u>Nucleus</u> physics engine for computer animation.
- · Created many interactive physics demos using the new API built with C++, QT, and OpenGL.
- Developed a Python wrapper for the API using SWIG and samples with PyOpenGL.
- · Prepared technical documentation for the Nucleus API along with a getting-started guide.

TECHNICAL SKILLS

- · Languages: Python, Java, C++, Javascript, R, HTML/CSS, MATLAB, Scheme
- · Amazon Web Services: Boto, EC2, SQS, S3
- · Revision Control: Git/Github, Perforce, Phabricator
- Graphics: OpenGL, Blender, Design Script, Processing, openFrameworks, 3D Printing Tools
- · Other Technologies: Docker, Redis, Selenium, SQL, OpenCL, SWIG, QT, NumPy