

LOGAN ENGSTROM

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WORK EXPERIENCE

Research Assistant Gifford Lab, MIT CSAIL Summer 2014-Present
Cambridge, MA

Full-time during summer, part-time during school year. Subject of work is discovering and researching patterns of genetic heritability using machine learning algorithms on a large yeast data set. Work includes tuning machine learning algorithms, cross-validation, and creating null distributions for data. Used mainly Python, Bash, and some C++. I expect to publish a paper on heritability explained by interacting quantitative trait loci by summer 2015.

Research Assistant MIT Whitehead Institute Summer 2013
Cambridge, MA

Full-time during summer. Programmed web and command line interfaces for Whitehead Institute scientists. Work included creating workflows for biological analyses, programming web-based front ends for workflows, programming job queuing systems, and analyzing the effects of DNA quality on sequence alignment. Used mainly Python and Bash.

Software Engineering Intern EquipNet Inc. Summer 2011
Canton, MA

Worked 35 hours a week performing data entry and programming .NET (ASP, VB, C#) applications. Projects included IT issue reporting software, database management software, and website design.

HONORS AND AWARDS

PennApps X (UPenn's Collegiate Hackathon): Top 10 Finalist and "Best iOS App" Award for **Flare**, awarded by Apple (2014)

Apple Developer Student Scholarship (2014)

js13k 2014 (Javascript game competition): 7th place mobile category with **Radial** (2014)

MIT Club of NY's "Dream it. Code it. Win it.": Finalist with **Trustee** (2014)

HackExeter (Exeter's High School Hackathon): Grand Prize winner with **Hextris** (2014)

FIRST Robotics: "Control Award" (main programming award) at FTC East Coast Super Regionals competition (2014)

PROJECTS *Note: bolded names link to the projects*

Published Games

Hextris: Javascript/Canvas puzzle game. Played more than 5 million times across iOS, Android, Firefox OS, and web. (2014)

Radial: Javascript/Canvas action game made for js13k 2014. For iOS and web. (2014)

Pyramid Renderer: Javascript/Canvas/WebGL pyramid renderer, featured on Google's Chrome Experiments. (2013)

Dangerous Chef Pioneer: JavaScript/Canvas psychological top down shooter game. (2013)

Problematic Particles: Objective-C iOS puzzle game in which players manipulate gravity to transport particles around obstacles and into goals. (2014)

Published Tools/Libraries/Miscellaneous Software

Flare: Phone-to-phone communication protocol (and implementation) made for UPenn's "PennApps X." Enables cross-platform message passing between two smartphones using flashing colors on a screen and a video camera. Programmed in Objective-C, Java, and Javascript. (2014)

LSRHS Schedule: Mobile version of Lincoln-Sudbury high school's scheduling system. Built

with Objective-C, Python, Javascript and CSS. Includes reverse engineered authentication and data retrieval. (2013)

Math Evaluator: Sublime Text 2/3 plugin that evaluates text selections containing mathematical expressions. Used by several hundred developers. (2014)

SKILLS

Fluent in Javascript, Node.js, CSS

Competent in Objective-C, Python, Bash scripting/unix tools, Git, Arduino, Java

EXTRACURRICULAR ACTIVITIES

Organized Hackathons “LexHack” and “Lincoln-Sudbury Local Hack Day” (2014)

Founder/President of Lincoln-Sudbury Programming Club (2013-2015)

FIRST Robotics: Lead programmer on FTC Team 6055 “Gearticks” (2012-2014)

Captain on Lincoln-Sudbury Debate Team (2012-2014)

Varsity High School Cross-Country Team (2014)

EDUCATION

Lincoln-Sudbury Regional High School, Sudbury, MA (2011-2015)

G.P.A. 3.9/4.0 (10th-12th grade)

“5” on AP Computer Science Exam (2014)