LOGAN ENGSTROM

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WORK EXPERIENCE

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

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, Cambridge, MA — Summer 2013

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., Canton, MA — Summer 2011

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

Massachusetts Institute of Technology, Cambridge, MA (2015-2019)

Lincoln-Sudbury Regional High School, Sudbury, MA (2011-2015)
GPA 3.9/4.0 (10th-12th grade)
"5" on AP Computer Science Exam (2014)