LIAM DUGAN

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EDUCATION

University of Pennsylvania — School of Engineering and Applied Science, Philadelphia PA
Candidate for Master of Science in Engineering in Robotics — 4.00/4.00   (Expected Grad: December 2019)
Candidate for Bachelor of Science in Computer Engineering with Minor in Japanese Language — 3.55/4.00

<u>Coursework</u>: Embedded Systems for Life Critical Applications, Micro-controller lab, Interactive Computer Graphics, Operating Systems, Computer Vision & Machine Perception, Networked Systems, Mechanical Design

St. Joseph's Preparatory High School — Philadelphia, PA — Cumulative GPA: 4.0/4.0

TECHNICAL SKILLS & PROJECTS

- **Java Projects:** UNIX-esque scheduler, Huffman/LZW Compression, Wikipedia XML parser/search
- **Javascript Projects:** Chrome Extension, Full stack web app final project React/Node/Mongo/Express
- **C Projects:** Virtual 16-bit computer, minimalistic C compiler, stack based calculator, OS shell
- **Robotics Projects:** Self-balancing bot, "Todd: The inter-dimensional robot" - *3rd place at PennApps*
- **Embedded Sys. Projects:** Theremin, Pacemaker, "Fix Yourself" - *IoT wearable posture tracker*
- **Analog Circuits Projects:** AC/DC Converter, 2nd order filter, Transistor Amp, Audio Docking Station
- **Other Skills:** C++, MATLAB, bash scripts, ARM mbed, HTML/CSS, Solidworks, Laser Cut/3D Printing

WORK EXPERIENCE

Employment:

Computer Architecture Teaching Assistant, Philadelphia, PA   Spring 2017 to Present
- Teaching students topics such as binary operations, assembly language, computer data path, memory management in C, function calling convention, and stack frames
- Projects include a minimalistic compiler and simulating a virtual 16-bit computer in C

Javascript Online Course Teaching Assistant, Philadelphia, PA   Fall 2017
- Taught UPenn sponsored course covering HTML, CSS, Node.js, Mongoose, React.js
- Helped create course infrastructure (i.e. assignments, autograders, etc.)
- Answered all questions for course of ~4000 students

Kyoto Consortium for Japanese Studies, Kyoto, Japan   Summer 2017
- Intensive 2 month Japanese language program sponsored by Columbia University
- Studied equiv. two years of Japanese, drastically improved conversational ability
- Gave talk on Self-Driving Cars in Japanese for the final presentation

PERSONAL PROFILE

Hobbies: Music (Piano) self study in Music Theory, World Record fastest completion of Sonic the Hedgehog
Japanese: Upper Intermediate level; Business fluent, registered to take JLPT N2 in the winter