

Justin Jo

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Education

Tufts University – Medford, MA

May 2018

Bachelor of Science in Computer Engineering & Computer Science

GPA: 3.95, Deans List all semesters

Relevant Courses

Microprocessor Architecture, Machine Structure, Algorithms, Data Structures, Discrete Mathematics, Probabilistic Systems Analysis, Digital Logic Systems, Linear Systems, Electronics I, Hyperspectral Imaging

Technical Skills

Programming Languages: C++, C, Python, Arduino, JavaScript, HCS12 Assembly, MATLAB

Computer Tools: Unix, Git, Xilinx, LTSpice

Work Experience

Tufts University, Teaching Assistant – Algorithms

Jan 2017–Present

- Clarify course material during office hours and answer students questions
- Teach review sessions on algorithmic topics

MultiSensor Scientific, Image Processing Intern

June 2016–Aug 2016

- Developed morphological noise-cleaning algorithms to prepare gas jet imagery for analysis using MatLab
- Implemented these MatLab scripts in C for real-time use at gas leak sites
- Optimized noise-cleaning algorithms, resulting in 80% runtime speedup
- Implemented foundation of gas leak rate estimation utilizing linear least square fit calculations

Tufts University, Mechatronics Lab Assistant

Feb 2016–May 2016

- Assembled Arduino projects for demonstrations and display
- Developed online tutorials and resources for students in soldering and Arduino
- Trained students to safely use small CNC router and soldering irons in the lab space

Projects

Land Mine Detecting Swarm Bots

Jan 2017–Present

Pair of autonomous robots mimicking the detection of land mines. Features path and obstacle detection using photo-reflective sensors. Communication systems function via sub-fringe ultrasound. Arduino

Universal Machine

Mar 2017 - Apr 2017

Turing-Complete machine that executes 14 specific instructions. Emulator operating at the machine architecture level. Optimization resulted in a 94% runtime speedup. C

Logic Minimization CAD Tool

Apr 2017

CAD tool to perform minimization on boolean logic function, featuring Quine McCluskey's and Petrick's methods. Python

PubNub Chatroom

Jan 2017

Basic chatroom built using PubNub's JavaScript V4 SDK. Automatically assigns user IDs and allows users to send personalized messages to a centralized chat. Includes automatic login/logoff messages. JavaScript

Extracurricular Activities

Tufts Climbing Team, Korean Student Association, Tufts Turbo