Kelly Brennan

425-221-6100 / kelly.brennan@students.olin.edu

Kbrennan711.github.io

EDUCATION

Olin College of Engineering — Needham, MA

September 2013-December 2017, 50% Olin Merit Scholarship value of $80,000 — GPA: 3.96

Major in Engineering; Concentration in Bioengineering

EXPERIENCE

Design that Matters — Salem, MA

Electrical and Systems Engineering Fellow — Summer 2017

- Designed electrical system and circuit boards for a fully integrated looks-like and interacts-like prototype of Otter, a newborn warming bassinet that is compatible with an existing double-sided phototherapy device
- Developed software for embedded closed-loop temperature control using interface input
- Conducted heated water bag test and measured the change in water bag temperature for IEC classification standards
- Wrote extensive documentation on testing, decision making and design choices

Engineering Capstone Course – Olin College of Engineering — Needham, MA & Hanoi, Vietnam

Electrical and Software Controls Engineer on Newborn Warmer (Otter) from Design that Matters — 2016 - 2017

- Designed the initial heating control circuit prototype and developed initial proportional control software of newborn warmer
- Modified the prototype design to meet IEC standards for newborn warmers
- Traveled to Vietnam twice to do rapid prototyping with the manufacturer and receive feedback from healthcare workers

Neurotechnology, Brains & Machines Course – Olin College of Engineering — Seattle, WA

Student and Team Member — Fall 2017

- Processed and analyzed multiple different sets of neuroscience data using statistical methods
- Final project included implementing our own experimental design, recording the neuronal signals, and processing the data

Affordable Design and Entrepreneurship Course - Olin College of Engineering — Needham, MA

Global Health Team – Design Team Leader — Spring Semester 2016

- Developed microfluidic device and centrifuge system to diagnose sickle-cell anemia as a point-of-care diagnostic system
- Focused system design to optimize for computer vision system to output test results

Software Design Course – Olin College of Engineering — Needham, MA

Artificial Intelligence Team — Spring Semester 2015

- Developed artificial intelligence agent that learns from experience to play and win PacMan games with Q—learning algorithm
- Designed and developed final project poster. Project website: http://pdemetci.github.io/PacManAI/

Real World Measurements Course - Olin College of Engineering — Needham, MA

Eye-Tracking Team — Spring Semester 2014

- Designed three channel functional electronystagmogram (ENG) to track eye movement
- Characterized banpass filter characteristics and led functionality testing

SKILLS

- **Leadership:** Director of Student Community Service at Olin (May 2015 – May 2017)
- **Programs:** SolidWorks, KiCAD, Python, MATLAB, Arduino, Adobe Suite (especially InDesign, Illustrator), LaTeX, Scrum software (slac & asana), Github (//kbrennan711)
- **Software Development:** AI algorithm development, control software, data analysis
- **Electrical Engineering:** Circuit and PCB design
- **Manufacturing:** 3D printing, laser cutter, vinyl cutter, soldering, most common wood shop machines

ACTIVITIES AND INTERESTS

- **Athletics:** ultimate frisbee, basketball, soccer, and lacrosse
- **Outdoors:** running, hiking, biking, camping, rock climbing, sailing, and skiing
- **Arts & hobbies:** pottery, narrative writing, and cooking