linkedin.com/in/tkeady
thomaskeady.github.io

Thomas Keady

516-729-9535
thomas.keady@jhu.edu

Education

Johns Hopkins University — Baltimore, MD
MSE: Robotics - Perception & Cognitive Systems — Expected May 2019
Bachelor of Science - Double Major in Electrical Engineering and Computer Engineering — May 2018
Cumulative GPA: 3.58 (Dean's List 5 semesters)

Languages

Advanced: MATLAB, Python, C++
Familiar: Java, Perl, Bash
Beginner: VHDL, Assembly

Technical Skills & Tools

Advanced: EAGLE PCB design, Bluetooth, soldering
Familiar: Power electronics, ROS, systems design
Beginner: Laser cutting, 3D printing

Experience

Galen Robotics — Baltimore, MD
Electrical Engineering Team Leader — May 2017 - present
- Designing microsurgery robots aimed at mass production and improved performance
- Solving challenges including EMI mitigation, redundant sensors and miniaturization
- Previously integrated features include backup battery, internal computer, fly-by-wire solenoid brakes, internal temperature monitoring and integrated tool IO
- Exhibited at the American Academy of Otolaryngology - Head & Neck Surgery Annual Meeting

FactoryFour — Baltimore, MD
Research & Development Team — May 2015 - present
- Designed and implemented scalable distributed architecture for 3D scanner with Raspberry Pis
- Achieved wireless time synchronization (<10ms max offset) between 32 Pis
- Automated 3D model generation with Agisoft Photoscan API
- Created robust script for remote control of RepRap CNC machines via the Internet
- Team selected to receive support from 500 Startups and Refactor Capital

Electronic Tracking for Earth Movers — Baltimore, MD
Advanced ECE Team Project Member — Sept. 2016 - May 2018
- Developed proof of concept for a mobile tracking system to prevent collisions between heavy machinery and construction workers
- Implemented Sequential Monte Carlo Particle Filter to estimate worker position relative to vehicle
- Experimented with software protocols and hardware platforms including networks of RFduinos, BLE Beacons, and iPhone receivers
- Won Best Technology Award and 3rd Place in Category at JHU Business Plan Competition 2018
- Custom hardware currently under development

Laboratory for Computational Sensing + Robotics — Baltimore, MD
Lab Manager & Student Researcher — Feb. 2016 - present
- Designed electrical systems for 5-DOF surgical system prototype
- Coded logic and user interface for multi-axis control via touchscreen and joystick
- Constructed circuitry for motors and reverse-engineered hydraulics
- Provide electronic interfaces for new surgical tools including drills and lasers
- New prototypes constructed as part of Galen Robotics

Applied Physics Laboratory — Laurel, MD
Advanced Application Scholars Program Intern — May 2016 - Aug. 2016
- Wrote C++ driver class for lossless communication with wireless sensing platform
- Created Java Native Interface for driver integration with existing Java projects
- Modified solar battery charger to change output of buck-boost converter from 12V to 25.2V