KATHERINE O'CONNOR

US Citizen ◇ Eligible for Security Clearance
(631) · 487 · 1585 ◇ katoco@mit.edu

EDUCATION

Massachusetts Institute of Technology *June 2014*
B.S. in Mechanical Engineering - Control Information & Robotics

- Concentration: Writing
- Coursework: Design & Manufacturing, Dynamics & Control, Microcomputer Project Laboratory

WORK EXPERIENCE

Voxel8, Hardware Engineer *Somerville, MA* October 2014-March 2015

· Conceptualized, tested, and prototyped new parts for multi-material 3D printer
· Operated, tested, and debugged early-stage prototype
· Designed demo parts to exhibit the printer's capabilities to clients and researchers

Understory Weather, Engineering Intern *Somerville, MA* June 2014-September 2014

· Designed and fabricated electromechanical test equipment, including a linear actuator and a pneumatic propulsion system, for callibration and ruggedness testing of prototype
· Used Solidworks to spec out requirements and working with suppliers and manufacturers to deliver necessary parts

Vishwa Robotics, Design Intern *Cambridge, MA* January 2014-June 2014

· Worked on a project to build a powered robotic exoskeleton for a project sponsored by the US Navy
· Modeled parts in Solidworks and constructed prototypes with a 3D printer and homemade thermoformer

MIT Architecture Department, Undergrad Researcher *Cambridge, MA* May 2013-August 2013

· Helped develop the next generation of Hyposurface, a 3D dynamic architectural surface
· Wrote motion control algorithms and ran tests for electric linear actuators

PROJECTS

Microcomputer Project Laboratory February 2014 - May 2014

Designed and built a CNC-controlled etch-a-sketch

· Laser cut gears and a frame to attach the knobs of the etch-a-sketch to stepper motors
· Designed and constructed a circuit to allow the stepper motors to be controlled by a microprocessor
· Wrote assembly code capable of drawing any arbitrary shape on the etch-a-sketch

The Product Engineering Process September 2013 - December 2013

· Collaborated on a team to develop a therapeutic robot targeted at dementia patients
· Wrote control algorithms in python for realistic, lifelike motions
· Team's prototype was ranked highest quality in the class

SKILLS

Programming Languages	Python, C, LATEX, *experience with* Java, C++, Arduino Basic
Software	Solidworks, Mathcad, *experience with* MATLAB, LabView, OpenCV, ROS
Hardware	3D printer, lathe, CNC milling machine, laser cutter, basic woodshop tools