MEL HO

Robotics Engineering Student and Fabricator

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www.bigbucksmel.com

EDUCATION

Robotics Engineering, B.S. | Applied Math, Minor

University of California, Santa Cruz

2018 – Present Santa Cruz, CA

GPA 3.79

EXPERIENCE

Undergraduate Researcher | DANSERLab

Dec 2018 - Present | Santa Cruz, CA

- Worked on fabricating different soft joint configurations and other hardware for a robotic arm.
- Fabricated custom lab-ware for Braingeneers
- Developed a modular system in Python for Reinforcement Learning and PID control.
- Debugged, optimized, and refactored code to conform to PEP8 standards.
- Repaired, maintained, and upgraded Lab 3D printers.

Shop Assistant | Savage Industries

June 2016 - Present | San Francisco, CA

- Worked with wood working tools, machine shop tools, sewing machines, lasercutters, 3D printers, waterjets, embroidery machines, and casting materials to build shop furniture, costumes, and props for Adam Savage
- Designed prop work using Photoshop and Illustrator.
- Designed circuits and electronics for costumes and props.
- Programmed arduino code and created custom circuits to be used for production and special effects.
- Maintained the shop and organized tools.
- Managed long term prop projects and delegated work to subcontractors

Dream Consultant | Techshop, LLC

Nov 2013 - July 2015 | San Francisco, CA

- Troubleshooted and repaired machines for wood working, plastic fabrication, metal working, electronics, and laser cutting.
- Maintained the facilities space repairing infrastructure when it is down. Assisted my team build out expansions to the space and modifications to the machines.
- Consulted members on their projects and provide guidance with the various machines
- Handled POS and CRM system and customer service.
- Taught basic electronic classes as an instructor.

CNC Machinist | Plethora

Apr 2014 - Sep 2014 | San Francisco, CA

- Toolpathed client CAD files to CAM gcode. Cut prototypes using a 3-axis and 5-axis Haas machine. Made custom jigs and helped software team map out autocam by performing different calibrated test cuts.
- Machined PPE, Delrin, Aluminum, Brass, and Stainless Steel

SKILLS

Arduino | C/C++ | Python | Verilog | CAM | AutoCAD | Inventor | Solidworks | Linux | Windows | Mac | Fabrication | Computer Repair | Machine Repair | CNC | Matlab | LaTex | Illustrator | Photoshop | Mujoco

INTERESTS

- Machine Learning
- Reinforcement Learning
- Control Systems
- Data Science
- Interactive art
- Synthesizers
- Animatronics
- Automata

ACHIEVEMENTS

- **Tau Beta Pi** | Member
  Engineering Honors Society
- **Dean's Honor List** | UCSC
  Fall 2019
- **Project Egress** | Contributor
  Contributed to "Project Egress" build for the 50th anniversary of the Apollo 11. Art piece was featured in the Smithsonian National Air and Space Museum.