

Elizabeth Poss

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Education

Harvey Mudd College (HMC) Claremont, CA

Expected May 2019

Bachelor of Science Engineering, Major GPA: 3.25; Overall GPA: 3.26

Relevant Coursework

Experimental Engineering | Advanced Systems Engineering | Microprocessor Systems Design
Engineering Mathematics | Electronic and Magnetic Circuits/Devices | Advanced Latin | Autonomous Vehicles

Skills

Software: Matlab, SystemVerilog, Python, Java, Racket, R, Arduino, Solidworks, Microsoft Office

Tools: Scanning Electron Microscope, PCB Design, Lathe, Mill, Soldering Iron and SMD Soldering, Oscilloscope, Sterile Cell Culture

Languages: Latin reading and writing (proficient)

Research Experience

Engman Lab Cornea Project, Harvey Mudd College

Spring 2016 - present

- Used electrospinning to create normalize nanofibers of varied composition, mimicking corneal structure. Investigated effect of extracellular matrix on corneal keratocyte protein expression.
- Presented work at the European Chapter Meeting of the Tissue Engineering and Regenerative Medicine International Society, Davos Switzerland, June 2017

Project Experience at HMC

City of Hope Clinic Project

Spring 2017 - present

- In progress. Design, build, and test smoke evacuation systems for laparoscopic surgery.
- Integrate wireless camera systems into surgical trocars while maintaining low cost.

Weather Controlled Cloud Light

Fall 2017

- Developed a prototype cloud-shaped light simulating real-time weather like sunrise, rain, and lightning.
- Designed Verilog hardware decoding weather commands into LED actions transmitted via SPI.

Engineering Design and Manufacturing Proctor

Fall 2016 - Fall 2017

- Designed two labs exposing students to prototyping methods and mathematical modeling.
- Assembled, calibrated, and developed tutorials for a Stereolithography printer, Sherline Mill, and 3D Scanner.

Autonomous Underwater Vehicle

Spring 2017

- Worked in a team of 4 to design, build, and test an underwater AUV which measured changes in ocean temperature based on time of day, depth, and tides.

Sleep Deprivation Buddy

Fall 2016

- Competed in a hackathon with a team of 4 to design, build, and calibrate an interactive desk pet. Accepted user and environmental inputs, with pet health dependent on ambient light, encouraging healthy sleep habits.
- The project won second within the hackathon and was featured in the LA Times.

Activities

President, Mudd Makerspace

Spring 2016 - present

- Reviewed and re-developed safety and management policies for the space.
- Developing workshops and events, advertise and promote the Makerspace. Facilitate individuals' projects.

Organizer, Muddhacks (HMC Hardware Hackathon)

Fall 2017 - present

- Facilitated logistics and organization. Aided teams in parts selection and hardware design decisions.
- Contacted sponsors, organized judging and mentoring team of industry professionals.