Elizabeth Poss
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Education

Harvey Mudd College (HMC) Claremont, CA — Expected May 2019
Bachelor of Science Engineering, GPA: 3.2

Relevant Coursework

Experimental Engineering | Advanced Systems Engineering | Microprocessor Systems Design
Engineering Mathematics | Biostatistics | 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 collagen nanofibers mimicking corneal structure. Normalized fiber diameter of nanofibers of different composition, investigating effect of extracellular matrix on cell 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

Weather Controlled Cloud Light — Fall 2017 - present

- In progress. Designed a system utilizing a Raspberry Pi and FPGA to control LEDs over SPI.
- Accesses weather API data to let the cloud-shaped light mimic weather patterns, hosts a web server to take user commands. Work will continue past an initial prototype for design of a consumer product.

Engineering Design and Manufacturing Proctor — Fall 2016 - Fall 2017

- Designed two labs exposing students to prototyping methods and mathematical modeling.
- Assembled, calibrated, and developed student exercises 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.

Semi-Autonomous Soccer Field Layout Aid — Spring 2016

- Worked in a team of 3 to create an Arduino based system mounted on existing layout devices to track location and direct the user, significantly minimizing the time necessary for the task.

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.*