Tyler Faye

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Education

UNIVERSITY OF COLORADO – 2015-2019

BS in Electrical and Computer Engineering, 3.129 Overall GPA

RELEVANT COURSEWORK:

Introduction to Robotics, Introduction to Digital and Analogue Systems, Introduction to Circuits and Electronics, Embedded Systems, Electronic Design Lab, Digital Logic, Circuits as Systems, Linear Systems (Fall 2017), Data Structures (Fall 2017), Microelectronics (Fall 2017), and Programming Digital Systems (Fall 2017)

Engineering Experience

ELECTRICAL ENGINEERING INTERNSHIP – TERUMO BCT (SUMMER 2018)

- Designed a data logger to interface with existing devices, obtain relevant sensor values by communicating with an ADC via SPI, and output the formatted data over RS232
- Created an algorithm from the Beer-Lambert law to relate the optical attenuation of a laser or LED through a set of multiple mediums to the proportion of a specific component present within the mediums
- Worked independently in a BSL-2 laboratory to gather data and confirm the algorithm I created was accurate

ELECTRICAL ENGINEERING INTERNSHIP – MEDTRONIC (SUMMER AND FALL 2017)

- Designed and built a test environment capable of emulating the conditions within the abdomen
- Programmed two Arduino boards to work in tandem to automatically regulate the conditions within the test chamber based on sensor feedback and user-controlled set points
- Researched different operations within the abdomen and challenges surgeons face during laparoscopic surgery

INTEGRATION AND TEST ENGINEER – NASA SPACE GRANT (SPRING 2016)

- Worked in a team of three to prepare a satellite tracking ground station for use in future Space Grant projects
- Calculated, modeled, machined, and installed counter-weights to balance 14ft parabolic dish, alongside the design and fabrication of key weatherproofing elements for various RF components
- Other duties included the installation and alignment of antennae and control systems onto the dish

Specialized Skills

DESIGN AND MODELING

- Experienced in Solidworks, including individual part design and assembly creation (past work available)
- Familiar with the use of Multisim to design and simulate circuits before implementation

PROGRAMMING

- Experienced in C programming for real time embedded systems
- Practiced in the use of both Wolfram Mathematica and Matlab

MACHINING, FABRICATION, AND TESTING

- Trained in the use of manual lathes, manual mills, CNC lathes, CNC Mills, 3D printers, laser cutters, belt sanders, and other common shop tools such as saws and drills.
- Trained in the use of benchtop equipment such as oscilloscopes, multimeters, power supplies, and function generators
- Experienced in the use of MasterCAM and HSMWorks to generate g-code
- Adept at soldering and crimping for projects involving anything from PCB's and PWM to 4-gauge wire