ALEX FEELEY

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EDUCATION

VANDERBILT UNIVERSITY – NASHVILLE, TN May 2022
Bachelor of Engineering in Computer Engineering and Math & Master of Engineering in Electrical Engineering GPA: 3.7/4.0
Minor in Computer Science

- Honors: IEEE Eta Kappa Nu Honor Society (Top 25% of Electrical Engineering Class), Dean's List (Fall 2018, Fall 2019)
- Relevant Coursework: FPGA Design, Microelectronic Systems, Microcontrollers, Electronics I, Digital Logic, Computer Organization, Circuits I & II, Intermediate Software Design, Data Structures, Linear Algebra, Differential Equations

EXPERIENCE

Boeing Tukwila, WA
Solid State Electronics Development Intern May 2020 – August 2020

Vanderbilt Institute for Space and Defense Electronics Nashville, TN
Undergraduate Researcher August 2019 – Present

- Evaluated the effects of total ionizing dose and single event effects on 7nm technology
- Ran experiments and analyzed data to determine the effects of certain particles on the functionality of integrated circuits

Vanderbilt Institute for Integrative Biosystems Research and Education Nashville, TN
Undergraduate Researcher May 2019 – August 2019

- Conducted literature review on vitamin A and the current methods to determine vitamin A concentration
- Designed and simulated a circuit using LTSpice to trans-dermally measure the concentration of vitamin A with a high-power LED and a photodiode
- Presented research findings at the 2019 SyBBURE Summer Symposium and the Fall 2019 Undergraduate Research Fair

Westfield Memorial Pool Westfield, NJ
Assistant Manager May 2018 – August 2018
Lifeguard and Swim Instructor July 2015 – August 2018

PROJECTS

Battery-Charging Bangle May 2019 – April 2020

- Designed and 3-D printed a hollow bracelet using AutoCAD which was made into an inductor using magnet wire and magnetic marbles
- Surface mount soldered bridge-rectifiers to allow dual motion of magnetic marbles throughout the bangle, increasing the charge generated by the bangle by 100%

Arduino Walkie-Talkie October 2018 – December 2018

- Implemented two-way audio and speech using an Arduino and a circuit containing a transceiver, electret microphone, and button for two-way communication over 30 feet

ACTIVITIES

SyBBURE Searle Undergraduate Research Program May 2019 – Present

- Earned competitive funding to engage in year-round research
- Engaged in weekly modules for 'soft' skills and technical skills, and small group meetings to discuss research progress

Theta Tau Professional Engineering Fraternity August 2018 – Present

- Participated in engineering specific social and professional development activities

SKILLS

Languages (in order of proficiency): C++, VHDL, Verilog, Python, React, HTML5, CSS3, Java
Technologies: Git, Altera Quartus, Xilinx Vivado, LTSpice, Mathematica, AutoCAD, EAGLE/KiCad, Arduino, LaTeX
Certifications: Vanderbilt Radioactive Material Safety, Lifeguard, First Aid, CPR, AED, Water Safety Instructor