Jake Hafele

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Objective

Seeking an electrical engineering internship in hardware design and/or testing for the Summer of 2023.

Education

Iowa State University, College of Engineering

Bachelor of Science in Electrical Engineering — **Expected Fall 2023**

GPA: 4.0/4.0

- Top 2% of Engineers award — **2019 – 2022**
- College of Engineering Dean's List — **2019 – 2022**

University of Limerick Study Abroad Program — **Spring 2022**

Employment

Collins Aerospace, Systems Engineer Intern — **May 2022 – Present**

- Update documentation on CH-47F Chinook that satisfies customer needs and requirements
- Validate software and hardware updates system wide through a suite of tests
- Learn and research about new subsystem designs that change the functionality of the Chinook
- Contribute to team wide test events which covers the span of system integration over a full week

Workiva, Software Engineer Intern — **May 2021 – August 2021**

- Responsible for programming Java software which managed roles for admin users of organizations and creating module-based solutions in dart
- Verified developed code against 700+ tests and was responsible for tracing stack errors back to the correct area, which helped teach me how to navigate errors easier and think critically
- Collaborated with 10+ developers in an agile work flow to continuously push out new code

Skills

Hardware	Debugging PCB's, Soldering, Creating Bill of Materials, HAM Radio License
Programs	Git, Altium, KiCad, LT Spice, Subversion, Arduino IDE, Fusion 360, Cura
Coding	MATLAB, Python, C, C++, Java, HTML

Projects

Solar Car

- Lead and designed the battery protection system, which monitors and regulates the voltage, current, and temperature of 1,190 lithium-ion batteries in a 140-volt pack, with the work of Altium
- Collaborated and trained new members with the horn and lights project, which controls the front and rear driver applications of the solar car by interfacing LED light strips following requirements
- Implemented a catalogue system of 500+ parts and a PCB library with 150+ layout footprints

"Useless" Machine

- Designed a PCB in Altium to read 8 different switches and pass them to Arduino code
- Integrated circuits between a custom PCB and an Arduino board to manipulate 3 moving servos
- Used Fusion360, Cura, and a 3D printer to create 4 moving pieces for an improved autonomous arm from a previous project

Activities and Leadership

- PrISUm Solar Car Club – Hardware Manager, Driver, Librarian — **2020 – Present**
- Critical Tinkers – Secretary — **2019 – Present**
- The Engineering Ambassador and Mentor Program — **2020 – 2021**