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

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

Employment

Collins Aerospace, Systems Engineer Intern - Cedar Rapids, IA — **May 2022 – December 2022**

- Updated documentation on CH-47F Chinook that satisfies customer needs and requirements
- Verified software and hardware updates through a suite of system wide tests
- Inspected current and new subsystem designs that are integrated into the Chinook system
- Performed system verifications before software release that verify system integration

Workiva, Software Engineer Intern - Ames IA — **May 2021 – August 2021**

- Responsible for designing Java software which managed roles for admin users of organizations
- Verified developed code against an automated test suite and debugged stack errors
- Collaborated with 10+ developers in an agile work flow to continuously enhance and fix old designs

Iowa State University, Digital Logic Teaching Assistant - Ames IA — **January 2021 – May 2021**

- Prepared and taught course material in labs weekly, using ModelSim and Quartus Prime to simulate circuits
- Collaborated with professor and other teaching assistants to prepare proper grading keys and Verilog code
- Proctored and graded 3 separate exams, involving 60+ students
- Covered course material in office hours, including combinational logic, sequential logic, and state machines

Skills

Skills	Debugging PCB's, Soldering, Creating Bill of Materials, HAM Radio License, Version Control
Tools	Git, Altium Designer, KiCad, LT Spice, ModelSim, Quartus Prime, Vivado, Subversion
Coding	C, Verilog, VHDL, Python, MATLAB

Projects

Solar Car

- Lead the battery protection project with Altium Designer, which monitors and regulates the voltage, current, and temperature of 1,100+ lithium-ion batteries in a 140-volt pack
- Trained and collaborated with new members on the horn and lights project, which controls the front and rear driver applications of the solar car by interfacing with LED light strips following regulation requirements
- Implemented a catalogue system of 500+ parts and a PCB library with 150+ footprint layouts

Autonomous Robot Arm

- Designed a custom PCB to read 8 different switches and pass them to an Arduino microcontroller
- Improved upon previous project and code by reimplementing designs to manipulate 3 individual arm servos
- Used 3D Fusion360, Cura, and a modified 3D printer to create 5 unique pieces of the autonomous arm

Activities and Leadership

- PrISUm Solar Car Club – Electrical Team Leadership — **2020 – Present**
- Critical Tinkers – Leadership Cabinet — **2019 – 2022**
- The Engineering Ambassador and Mentor Program — **2020 – 2021**

Honors

- Top 2% of Engineers in Class Award — **2020 – 2022**
- College of Engineering Dean's List — **2019 – 2022**
- Don K. Ford Electrical Engineering Scholarship Recipient — **2022**
- Maria B. and Bob O. Evans Scholarship Fund Recipient — **2020 – 2021**