

# 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, Ames, Iowa

Electrical Engineering (B.S.)

Studied abroad at the University of Limerick, Ireland

GPA: 4.0/4.0

- Top 2% of Engineers award
- College of Engineering Dean's List

Expected Fall 2024

Spring 2022

2019 – 2022

2019 – 2022

## EMPLOYMENT

### Collins Aerospace, Systems Engineer Intern; Cedar Rapids, Iowa

August 2021 – Present

- Update documentation on CH-47F Chinook that satisfy 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; Ames, Iowa

May 2021 – August 2021

- Responsible for programming java software which managed roles for admin users of organizations and creating module-based solutions in dart for a front-end user interface
- 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 team setting where work was constantly being reviewed weekly, where I then learned how to develop team goals and proactiveness

## SKILLS

**Hardware** Debugging Boards, Soldering, making bill of materials, 3D printing

**Software** Git, Altium, KiCad, LT Spice, Arduino IDE, Fusion 360, Cura

**Languages** C, C++, MATLAB, Python, 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 130-volt pack, with the work of Altium
- Managed the horn and lights project, which controls the horn, front, and rear lights by creating a bill of materials and debugging the board with new team members
- Implemented a catalogue system for 500 parts which are used in each circuit board we design

### “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 autonomous arm

## ACTIVITIES AND LEADERSHIP

- PrISUm Solar Car Club – Board Manager, Librarian
- Critical Tinkers – Secretary
- The Engineering Ambassador and Mentor Program

2020 – 2022

2019 – 2022

2020 – 2021