## Matthew Felsen

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## Skills

C/C++, C#, Arduino, Windows Powershell, Python, MATLAB, AutoCAD, Data Structures & Algorithms

# Experience

John Deere

## **Product Engineering Intern**

May 2018 - August 2018

- Analyzed and designed Hardware in the Loop software test system architecture for next generation controllers
- Wrote and Improved scripts for Agile tools to streamline workflow
- Acquired skills in CAN protocol and Model Based Software Development

Kiewit

#### **Electrical Design Intern**

August 2015 - December 2015

- Responsible for creating and editing schematics across 2 different contracts
- Designed electrical circuits using MicroStation
- · Collaborated with head Electrical Designer and Lead Engineer

## Education

University of Kansas

B.S. Computer Engineering

January 2018 - May 2020 3.78/4.00

Missouri University of Science and Technology

B.S. Electrical Engineering

Pi Kappa Alpha Fraternity

August 2016 - December 2017

# Projects

**LED Pace Clock** 

- LED strip designed to run at a certain speed to keep pace for timing-based sports like Swimming and Track
- API made in C# sends data to microcontroller
- Microcontroller firmware written in C++ reads data from API

Window Weather Vent

- Window insert that automatically controls air flow from atmosphere to room based on temperature and humidity data
- Provisional Patent filed to demonstrate proof of concept
- Lead Electrical Engineer who oversaw 4 members on electrical team

Laser Harp

MIDI instrument designed for musicians with disabilities.

#### **Activities**

#### Missouri S&T Swim Club President & Founder

- Founded and led organization of 60 recruited members
- Oversaw 5 executive officers
- Facilitated communication between 20 teams
- Responsible for \$6,000+ annual budget

Institute of Electrical and Electronic Engineers (IEEE)