

## 🎓 Education

May 2022 **University of Illinois Urbana-Champaign** *BS in Computer Engineering.*  
GPA: **3.88** / 4.0 | College of Engineering Dean's List Every Semester

May 2018 **Parkway South High School.**  
Summa Cum Laude (Highest Honors)

## 🛠 Work Experience

### **Caterpillar, Software Engineering Intern**

May 2020 - Current

- Recruited for new position within Caterpillar.
- Assigned a new application to develop display software from scratch.
- Programmed new engine display features using Java and HTML.
- Designed an emulation platform to provide analytic data to legacy hardware.

### **Caterpillar, Control Systems Engineering Intern**

May 2019 - May 2020

- Caterpillar extended the position through the academic year for me.
- Analyzed memory chip failures to assess future risk and minimize it.
- Designed service routines to locate hard to detect, mechanical faults on engines.
- Integrated new requirements into existing control system specifications.
- Implemented control system specifications with Matlab Simulink.
- Built and launched a collaborative database allowing engineers to reuse past calibrations and distribute new features to all relevant engines.
- Developed software tools to simplify interactions with the requirements database.
- Performed hardware in the loop (HIL) testing on pre-release software.

### **Offroad Illini - Baja SAE Team, Electrical and Drivetrain Subteam Member**

Aug 2018 - May 2019

- Redesigned gearbox shafts to be more reliable and durable.
- Assisted in manufacturing of suspension and drivetrain components.
- Designed and built a track timer utilizing an arduino and sensors such as a radar.
- Programmed a Java android app to interface with the timer via bluetooth.

### **First Tech Challenge Robotics Team, Captain and Lead Programmer**

Aug 2015, May 2018

- Led team to two consecutive placements at the First World Championship.
- Planned and ran events at elementary schools about STEM education.
- Analyzed camera images using OpenCV.

## 👤 Skills

C, C++, x86 ASM, Java, Python, Matlab Simulink, Visual Basic, HTML,  $\text{\LaTeX}$   
git, Native Android Development, Linux System Development, Microsoft Excel Macros, Analog Circuit Analysis

## 📖 Relevant Courses

ECE 391 Computer Systems Engineering, ECE 486 Control Systems, CS 225 Data Structures, ECE 210 Analog Signals and Systems, PHYS 213 Thermodynamic, PHYS 214 Quantum Mechanics

## 🏆 Awards

UIUC College of Engineering Dean's List, HackIllinois Unanimous Grand Prize Winner, Uncommon Hacks First Place IOT Prize Winner, Eagle Scout, FIRST Robotics Dean's List Semi-Finalist