ALAN CONNOR

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EDUCATION

University of Illinois at Urbana-Champaign **Expected May 2025**
Bachelor of Science in Mechanical Engineering GPA: 3.88/4.00

Related Coursework:
Electrical and Electronic Circuits Probability and Statistics C++ Programming for Engineers

Oakton College, Des Plaines IL **Graduated May 2023**
Associate of Science in Engineering GPA: 4.00/4.00

TECHNICAL SKILLS

CAD: SolidWorks, Fusion360, AutoCAD, Creo
Programming Languages: C++, MATLAB, Python, VBA
Microsoft Office: Excel, Word, PowerPoint

WORK EXPERIENCE

Semler Industries, Engineer Intern **May 2024 – August 2024**

- Programmed and tested the PLC controls for valves, pumps and meters in biodiesel and diesel exhaust fluid blenders
- Researched different filters, sensors, pumps and other components and instrumentation devices to use in products
- Tested HMI screens and piping for leaks for completed equipment to confirm metrics meet design requirements
- Troubleshooted and repaired various faulty equipment
- Prepared documents related to the creation and testing of new product developments or other assigned projects
- Created 2D drawing of plant layouts using AutoCAD
- Designed and created 3D drawings of skid frames, piping layout and sheet metal parts for products using Creo
- Worked with different members of the sales groups to design custom equipment

EXTRACURRICULAR ACTIVITIES

VEX Robotics R&D **August 2023 - Present**

- Designed an omnidirectional wheelchair to allow users more flexibility in their movement
- Developed mechanical component in chassis prototype using Fusion360
- Programed controls for the wheelchair prototype using vector projection, NumPy python package and Raspberry Pi
- Researched information in order to come up with new ideas for the wheelchair
- Organized team meetings and documents and presented progress to professors funding research

PROJECT HIGHLIGHTS

Fruit Slicer **January 2024 – May 2024**

- Built and designed an automatic fruit slicer for people with hand and arm disabilities
- Calculated the force needed to cut different types of fruits and the gear ratios required for the belt and slicing arm
- Modeled the motion of the cutting blade using tracking software
- Simulated the motion of the blade and create motion plots using MATLAB

Two Digit Display Circuit **November 2023 – December 2023**

- Developed circuit with two digit seven segment display to present numbers 0 to 99
- Designed a program with Arduino in C++ to take readings from encoder pulses to control the display

Golf Mechanism **August 2022 – December 2022**

- Collaborated in a team of 3 to build a golf mechanism that hit a golf ball into a hole at three different distances, getting 1st place in best cost and lightest weight
- Estimated cost of the project by researching online and organized cost of each part in an excel spreadsheet
- Designed the structure of the golf mechanism using SolidWorks