

Zephyr Conley

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EDUCATION

Worcester Polytechnic Institute

May 2025

B.S Mechanical Engineering; B.S Robotics Engineering

Worcester, MA

- **GPA: 3.96/4.0** Dean's List, Tau Beta Pi Engineering Honors Society
- Relevant Coursework: *Deep Learning for Perception, Industrial Robotics, Software Engineering, Unified Robotics: Actuation, Sensors, Manipulation, Navigation, Mobile & Ubiquitous Computing*

WORK EXPERIENCE

Senvias/TPI Composites

May 2024 – Aug 2024

Advanced Manufacturing Engineering Intern

Warren, RI

- Performed safety analysis on a rotisserie system designed to raise and rotate composite molds weighing up to 2,000 lbs. Generated engineering drawings of the system and produced a comprehensive report detailing current safety concerns and possible solutions.
- Created composite test panels using a variety of seals, resins, and pouring methods to decrease porosity in composite parts
- Soldered thermocouples and permanently attached them to composite molds using epoxy resin for use in an industrial oven. Thermocouples ensured all regions of the composite part had reached the desired temperature, preventing defects in parts.

Framatome

May 2023 – Aug 2023

Instrumentation and Controls Engineering Intern

Mansfield, MA

- Coded an app in VBA with a user-friendly UI that allowed engineers to automatically extract information from multiple AutoCAD drawings, generate new drawings, and input data from a database into an existing drawing along with other useful functions.
- Collaborated with other engineers to understand what features would be most helpful when using the app.
- Documented the entire development process and wrote a step-by-step guide on how to use the tool for new users.

WPI Academic Resource Center

April 2021 – May 2024

Peer Tutor

Worcester, MA

- Tutored groups of 1-15 students in subjects such as physics (mechanical and electricity and magnetism), integral calculus and multivariable calculus.
- Communicated with professors and other tutors to help students achieve maximal understanding of subject material.

PROJECTS

Terrawarden Drone Cleanup - Major Qualifying Project

Aug 2024 – May 2025

- Working in a team of 6 to develop a drone capable of detecting and collecting garbage found on roadsides and highway medians.
- Currently working on making a CAD model of the drone as well as a working 3D printed prototype of the 3-DOF arm.

Robotic Navigation - SLAM and AMCL

Mar 2024 – May 2024

- Utilized a Turtlebot3 robot with a planar LiDAR to implement SLAM in a team of 3.
- Robot autonomously navigated and mapped an unknown space, and was able to localize within that space later.

Advanced Engineering Design – Four-Bar

Mar 2024 – May 2024

- Worked in a team of four to repair a past Major Qualifying Project (MQP) that consisted of a 4-Bar mechanism with motion sensors.
- Rewired and resoldered the mechanism so that all sensors worked and the system had a LCD display that showed important information.

TECHNICAL SKILLS

Languages	Python, Java, C++, C, MATLAB, Visual Basic
Software	Arduino, SolidWorks, Blender, Raspberry Pi, Microsoft Office Suite
Version Control	Git, Kanban, Github Projects
Other	ROS, ROS2, PyTorch, Soldering, Spanish (conversational level), Forklift Operator Certified

EXTRACURRICULARS

WPI Creative Writing Club, Treasurer	Feb 2022 - Present
WPI Concert Band, Section Leader	Aug 2021 - Present
WPI Sailing Team, Skipper	Aug 2024 – Present