

# Noah Zemlin

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## Education

M.S. Computer Science, The University of Oklahoma. May 2021.

B.S. Computer Science, The University of Oklahoma. May 2020.

## Work Experience

CIWRO – Research Associate **Norman, OK (June 2021 to Present)**

- As a member of the Radar Engineering and Development team, I develop hardware, firmware, and software to support the Multi-function Phased Array Radar (MPAR) for weather research mission.

Univ. Oklahoma – Graduate Teaching Assistant (Part-time) **Norman, OK (Jan 2021 to May 2021)**

- Assisted the graduate and undergraduate sections of Computer Graphics and Human Computer Interaction.

Boeing – Graduate Research Assistant (Part-time) **Oklahoma City, OK (Mar 2020 to Jan 2021)**

- Researched improvements to existing sensor fusion models to improve accuracy and computation time.
- Introduced additional uses of multithreading to the codebase to reduce wasted computation resources.

SupplyPike - Software Engineering Internship (Part-time) **Fayetteville, AR (Summer 2019)**

- Worked with the machine learning team to improve existing models using Python and Keras.
- Developed a new service to scrape textual data using several social media APIs and performed natural language processing using TypeScript, NodeJS, and Docker.

## University of Oklahoma

Sooner Competitive Robotics **Faculty Adviser (2021-Present) Student Member (2016-2021)**

- As a Faculty Adviser
  - I provide mentorship for the team as well as aid in administrative tasks and organization.
- As the student IGVC Captain and Software Lead
  - Developed C++ firmware on STM32 microcontrollers for a variety of tasks including velocity PID control, sensor data gathering, and radio communication. Devices interfaced with each other using several communication protocols including CAN, SPI, I<sup>2</sup>C, and UART.
  - Created a competition simulator for SCR robots using ROS and Unity in C# that communicates with our codebase over TCP.
  - Developed a convolutional neural network that detects painted lines in real time using Keras.
  - Led the development of software for autonomous and teleoperated robots using a mix of ROS, Arduino, Raspberry Pi, Python, C++, and Java.
  - Developed a UDP networking system to control a teleoperated robot over the internet in Java. It delivered both control data from the driver and video feedback from the robot.
- Led the development of an open-source robotics library in C++ for Arduino that provides easy and intuitive classes for motors, PIDs, and more.