

# Ryoma Kawakami

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## OBJECTIVE

Engineering internship opportunity for May - August 2019 applying computer science and engineering skills.

## EDUCATION

**The Ohio State University, Columbus, Ohio**

August 2018 - May 2022

GPA: 4.0

Bachelor of Science in Computer Science and Engineering

Recipient of Maximus Scholarship and Honda - Ohio State STEM Scholarship

**Bellefontaine High School, Bellefontaine, Ohio**

August 2014 - May 2018

GPA: 4.531, Ranking: 1st out of 220

National Merit Commended Scholar and National AP Scholar

Involvements: National Honors Society, Model UN, Marching Band

## ACTIVITIES AND INTERESTS

**EcoCAR**

August 2018 - Present

- Connected and Automated Vehicles (CAVs) Team
- Developing driver assistance systems that minimize human error and increase road safety, including adaptive cruise control and collision prevention
- Working with hardware (sensors and processors) and software (sensor fusion, filters, and simulations) to allow the vehicle to better analyze its surroundings

**American Society for Engineering Education (ASEE)**

August 2018 - Present

- Website Committee: Performing maintenance on website to market ASEE
- Creating a publicly accessible database of undergraduate research opportunities that allows professors to submit descriptions and requirements of open positions

**VEX Robotics Competition (VRC) Team Captain**

June 2013 - April 2018

- 2-Time State Champion
- Programmed robot movement control using motion profiling (with PID) in C/C++
- Built steel and aluminum metal robot using the VEX control system
- Documented the building, programming, and debugging processes during every meeting, to be used as a reference for future competitors and to prevent similar mistakes from happening more than once

## PROJECT EXPERIENCE

**Codeblock Creation**

- Wrote a file with many user-friendly functions such as 'move forward', 'set position', 'set indicator light' to assist younger members in learning more advanced programming concepts
- Created user manual based on preferences and questions from youth users

**Genetic Algorithm / Neural Network**

- Programmed genetic algorithms in C++ to learn to play simple games like Nim, as well as more complex games like Tetris
- Created neural network structure from scratch to allow the AI to make more advanced decisions based on game conditions and to train an AI to identify handwritten digits (from the MNIST database)

## QUALIFICATIONS

- Coursework: Fundamentals of Engineering Honors (FEH)
- Languages: C/C++, HTML/CSS, Java, JavaScript, MySQL, Python, Ruby on Rails
- Experience with MATLAB, Simulink, Stateflow, CAD software
- Knowledge of deep learning, genetic algorithms, and neural networks
- Several years of experience with robotics (building, programming, logistics)