

# David F. Vella

248-760-4439 · [davella@umich.edu](mailto:davella@umich.edu)  
7000 Willowing Oak Dr, White Lake, MI  
<https://github.com/David-Vella>

## EDUCATION

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University of Michigan, Ann Arbor, MI  
Studying Computer Science

*Exptected Graduation: Apr 2023*  
*GPA: 4.00 / 4.00*

### Coursework:

EECS 280 Programming and Data Structures

*Winter 2020*

- Algorithms, abstract and structured data types, recursion, pointers, testing and debugging
- Large programming projects in C++

ENGR 100 Intro Engineering Section 400 Autonomous Systems

*Fall 2019*

- Worked in a team to develop and implement control algorithms enabling a quadcopter to autonomously navigate a maze
- Wrote reports and delivered presentations on our teams progress and results
- Programming in C++ and control system simulation using MATLAB

ENGR 101 Intro Programming

*Fall 2019*

- MATLAB, C++, data structures, algorithms, testing and debugging, style

## PROJECT EXPERIENCE

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FTC Robotics Team #12505 – Student Mentor

*Sept 2018 – Apr 2019*

- Volunteered as a mentor to help my former middle school start a robotics team.
- Guided middle school students through the design and assembly of a robot using my experience from high school robotics.

FRC Robotics Team #67 – Electrical & Controls Lead

*Jan 2015 – Apr 2019*

- Led students through design and assembly of the robot's electrical and control system
- Quickly diagnosed and resolved electrical and software issues during competition
- Drove the robot during competition

## PERSONAL PROJECTS

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Snake Web Application <http://boredinclassgames.xyz>

*Dec 2019 – Present*

- Built a web app using Python and the Flask micro framework
- Programmed the snake game using JavaScript and created web pages using HTML and CSS
- Implemented a database leaderboard system using SQLAlchemy

Flight Controller for Radio Control Aircraft

*Aug 2018 – Aug 2019*

- Developed and implemented control algorithms for flight stabilization of radio control aircraft
- Programmed an Arduino microcontroller in C++ to read IMU data, decode user input signals, and actuate servo motors

## SKILLS

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C++, Python, JavaScript, HTML, CSS  
Windows, Linux

## ACTIVIES

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Michigan Ski Club  
Piano

*Aug 2019 – Present*  
*2006 – Present*