David F. Vella

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https://github.com/David-Vella

EDUCATION

University of Michigan, Ann Arbor, MI · *Expected Graduation: Apr 2023*
Studying Computer Science · *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

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

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

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

ACTIVITIES

Michigan Ski Club · *Aug 2019 – Present*
Piano · *2006 – Present*