

DIMITRI VAN WELL

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EDUCATION

Wayne State University

BS Electrical Engineering *GPA: 3.4*

Detroit, MI

May 2023

PUBLICATIONS

Practical Robotics in C++ (2^{ed})

Build and Program Real Autonomous Robots Using Raspberry Pi

Publisher: bpb

Q4 2024

WORK EXPERIENCE

Wayne State Robotics Team

Hardware Lead Engineer

Detroit, MI

April 2022 - August 2023

- Responsible for autonomous robot construction/ programming, integration, and design of sensors/control systems
- Led and mentored 10 members in mechanical and electrical design and construction.
- Prepared and maintained budget reports and technical documents
- Designed autonomous robot: concept, error checking, simulation, prototyping, and construction of mechanical, computer, and electrical systems. Accomplished manufacturing and integration under the allotted budget.
- Wrote autonomous navigation program. Takes in Laser Scan Data and follows the gradient of bounds to avoid obstacles. When incorporated into the stack created a redundancy for the robot's navigation across terrain.
- Received 2nd Overall and 6th in design at the International Intelligent Ground Vehicle Competition 2023

City of Dearborn

Crew Supervisor/ Technician

Dearborn, MI

August 2019 - Present

- Working on electronics, network integration for audio-visual and motor controls for performance venues
- Repaired electronics and handled 400-volt distribution systems
- Extensive knowledge and execution of industrial equipment and tools
- Design electrical architectures and schematics
- Signal debugging and filtering to reduce feedback loops and noise
- Lead Project manager for a new technology systems upgrade. This required writing a proposal and design that achieved approval of \$40,000+ in funding. In addition, overseeing the integration and installation of the final projects.

South Redford School District

Tech Director

Redford, MI

November 2016 - March 2022

- Programmed the coordination of intelligent lighting parameters, projection parameters, and audio/frequency filtering and debugging for streamlined performance for the venue
- Hired, managed, trained, and mentored up to 15 staff members, involving feedback to staff, and enforcing policies and deadlines

SKILLS

Programming Languages:	C, C++, Python, MATLAB, Assembly, HPC GRID Computing
Hardware/Microprocessors:	ARM Processors, Atmega 328 (Arduino), MIPS, RISC-V
Technologies:	MathCAD, AutoCAD, Wireshark, ROS, QtSpim, Cadence, Arduino IDE, Linux (Ubuntu, CentOS), LabView, PuTTY, NI Multisim

PROJECTS

Stop Light with Pedestrian *TI 4C123G Micro Chip*

github.com/DimivanWell/Micro-Computers

Through ARM programming, a physical circuit was built comprised of LEDs, Seven Segment Display, and an interrupt switch was used to craft a stop light with a pedestrian alert system.

Multithreading Cloud Server Customer Data Base *Python*

github.com/DimivanWell/Networking

Wrote a server and client-side back-end program

that takes in customer information like ID, name, phone number, address, and picture for a customer database app

Odd-Even Sort Parallel Algorithm *MPI in C*

github.com/DimivanWell/CSC6220-Parallel-Algorithm

Using 8 processors, write a program utilizing MPI that generates up to 224 random integers

and sorts them. The integers are to be within the bounds of [0, 128]. This was executed in the Wayne State Grid.