

DIMITRI VAN WELL

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SUMMARY

I have a BS in Electrical Engineering with experience in debugging, repairing, designing, and optimizing electrical systems. Proficient in a multitude of programming languages used to develop embedded systems and automate processes. I have a proven track record of leading multidisciplinary teams to deliver projects on time and within budget. Committed to staying at the forefront of vision and execution for the betterment of the organization's objectives.

SKILLS

Programming Languages:	C, C++, Python 3, MATLAB, Assembly, HPC GRID Computing, Verilog
Hardware/Microprocessors:	ARM Processors, Atmega 328 (Arduino), MIPS, RISC-V, FPGA
Technologies:	MathCAD, AutoCAD, Wireshark, QtSpim, Cadence, Arduino IDE, NI Multisim Robot Operating System (ROS), Linux (Ubuntu, CentOS), LabView, PuTTY

EDUCATION

Electrical Engineering	Detroit, MI
Wayne State University	May 2023

WORK EXPERIENCE

Electrical/ Robotics Consultant

Freelance Engineer [NDA]

October 2023 - Present

- Did firmware programming and research ways to maintain affordable per unit cost through efficient design alternatives.
- Using device design and analytic algorithms for data obtained through electrical pulse filtering.

Lead Hardware Engineer

Wayne State Robotics Team

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 to 6th place in design and 2nd overall at IGVC 2023.
- 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.

Crew Supervisor/ Technician

City of Dearborn

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
- Signal debugging and filtering to reduce feedback loops and noise
- Lead Project manager for a systems upgrade.
 - Designed proposal that achieved approval of \$40,000+ in funding.

PUBLICATIONS

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

Build and Program Real Autonomous Robots Using Raspberry Pi

Publisher: bpb

Q4 2024

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 3

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

Touch Screen Radio Arduino and Custom PCB

Utilizing the Arduino Mega and a TFT touch screen hat a GUI was programmed with volume, radio channel, and input control that was connected through GPIO to a PCB. The PCB triggers a relay for radio or aux amp power that is fed from a custom-designed band-pass filter with an onboard 3.5mm headphone jack.