Owen T. Gibson

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Education

August 2018-August 2023

Grand Valley State University - 3.5 Overall GPA

- **Bachelor of Science in Engineering - Major in Computer Engineering - Minor in Mathematics**
- Graduated in the Frederik Meijer Honors College
- Dean's list - Obtained for 6 semesters

Work Experience

August 2023 - Present

Gentex Corporation - Software Test Engineer II

- Execute software testing in accordance with Agile methodologies and utilizing state-of-the-art test execution equipment
- Verify the design and implementation of software to ensure it meets and exceeds customer expectations
- Craft automated test procedures following programming and documentation standards
- Support code reviews in a collaborative workspace including all functions of software development team
- Create custom internal tools to streamline workflow within code reviews
- Consistently complete sprints on time or ahead of schedule

May 2021- December 2022

JR Automation - Controls Engineer Co-op Intern (1 year)

- Executed all tasks required of Controls Engineering for a manufacturing automation market leader
- Programmed Allen-Bradley PLC Sequences in Logix Designer
- Programmed and troubleshot FANUC controls and custom programming standards of JR Automation
- Developed repeatable HMI platform using Ignition 8.1 which invoked 30k+ PLC tags - 30+ custom screens
- Designed multi-week training module for other incoming Interns, teaching PLC, HMI and FANUC robot basics
- Supported onsite installation of manufacturing cells for customer including demonstration and training

Project-Related Experience

September 2023 - April 2024

Personal Project: GIBCPU - 8-Bit Custom CPU Design

- Emulated in C, includes Assembler that translates custom Assembly language into bytecode
- 256 bytes of RAM, 4 registers, 15 custom instructions, internal modules work asynchronously
- Implemented Conway's Game of Life in available memory

January 2023 - August 2023

Grand Valley State University: Senior Project - Inverted Pendulum / DOOM Arcade Machine

- Demonstration of seL4 Hypervisor running an Inverted Pendulum and DOOM seamlessly in separate Operating Systems
- Project run on Xilinx Ultra96v2 FPGA, using custom PCB for driving pendulum motors and reading encoders
- Included comically large red button that restarted DOOM OS to demonstrate uninterrupted pendulum movement

January 2023 - March 2023

Grand Valley State University: EGR 426 - Bedside Sleep Apnea Recording Device

- Created a volume-triggered audio recorder using the STM32 Microcontroller Platform on custom PCB
- Utilized 32kb Flash memory chip to record audio data, fully custom code library for read/writes using SPI
- Fully controllable via Bluetooth console communication - manage audio entries, activate data transfer
- Developed toolchain that captured data from COM port and saved to file, then converted the data to MP3

Skillset

C	LabView	FPGAs
Python	Ubuntu	PCB Design
Java	Git	Embedded Systems
Xilinx Vivado	Agile	Controls Engineering
Ignition	Microcontrollers	Software Test Engineering