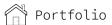
Jesse Both

Computer Engineer











(716) 218-9712

EDUCATION

STATE UNIVERSITY OF NEW YORK AT BUFFALO

BACHELOR'S OF SCIENCE IN COMPUTER ENGINEERING

Fall '18 - Spring '22

- → GPA 3.57 / 4.0
- → Dean's List: Fall 2021, Spring 2021

EXPERIENCE

TEACHING ASSISTANT | STATE UNIVERSITY OF NEW YORK AT BUFFALO

Fall '21 - Spring '22

→ Course: Introduction to Microprocessors

- Hosted lab sessions to assist students with ARM assembly topics and assignments with Tiva-C microprocessor.
- Conducted office hours and provided additional lecture materials to students.
- Assisting departmental officials in grading and student assessment after a semester.

→ Course: Computer Organization

- Conducted lab sessions to assist students with MIPS assembly concepts and assignments with QtSpim.
- Hosted office hours and aided departmental officials with lecture and project content.

PROJECTS

ROBOTIC ALGORITHMS | C++, LINUX

- Implemented algorithms like BUG2 and A* using ROS (Robot Operating System).
- Applied concepts of data structures and algorithms to find the most efficient path for the robot to move according to the algorithm.
- Utilized linear algebra and odometry data of the simulation to produce movement and obstacle avoidance skills for the robot.

GAMES ON MICROPROCESSOR | C, ARM ASSEMBLY, TIVA-C MCU

2021

→ 2048

- Implemented the game 2048 with C and assembly in order to explore the interaction between the two.
- Utilizes displays in the terminal via UART and can be controlled with key WASD or a 4×4 matrix keypad.
- Implemented by the university as the final project (Spring 2022) of Introduction to Microprocessors.

→ FlowFree

- Implemented completely in Assembly.
- Utilizes visual interfaces like the terminal to output with keyboard keys WASD as input.

CALENDAR | Scala, JavaScript, HTML/CSS, Shell, Raspberry Pi

2020

- Initiated the implementation of a program to stay organized when all classes moved online due to the pandemic.
- Designed to display the days schedule, running on a Raspberry Pi.
- Parses data from Google calendar in Scala and displayed data by a webpage.
- Runs shell scripts at startup to initialize the system.

SKILLS

PROGRAMMING

Proficient:

C • JS • Python Assembly (ARM, MIPS, x86)

Experienced:

C++ • Scala • HTML/CSS LATEX • Verilog • MATLAB AutoHotKev

Familiar:

Lua • Shell

HARDWARE

ARM Cortex-M4 • Arduino Raspberry Pi • Teensy • Nucleo NodeMCU • 3D Printing

SOFTWARE

Git • VirtualBox • Fusion 360 Excel • Microsoft Office • ROS Xilinx • Intellij • VScode

OPERATING SYSTEMS

Windows • Ubuntu • macOS

COURSEWORK

SOFTWARE

Robotic Algorithms RTOS / Embedded **Operating Systems** Data Structures Systems Programming Computations Intelligence

HARDWARE

Integrated Systems **Embedded Controls** Microprocessors **Electronic Devices** Circuit Analysis