

Victor Chen

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Looking for Fall 2024 Internship | U.S. Citizen

EDUCATION

Rochester Institute of Technology | Rochester, NY
Bachelor of Science in Computer Engineering Technology

August 2020 - May 2025
GPA 3.45

Related Coursework: Digital Systems Design (VHDL), Microcontroller Systems (C), Embedded Systems Design (VHDL), Digital Signal Processing (MATLAB), Signals Systems and Transforms, Hardware Description Language (VHDL), Real Time Operating Systems, AC/DC Circuits, Computational Problem Solving I, II (C++)

SKILLS

- **PROGRAMMING LANGUAGES:** VHDL, MATLAB, C, C++, Assembly
- **HARDWARE:** Arduino, Intel Cyclone V Soc FPGA w/ ARM processor, TI MSP432
- **SOFTWARE:** Visual Studio Code, STM32CubeIDE, Minitab, Code Composer Studio, Quartus Prime, ModelSim
- **EQUIPMENT:** Oscilloscopes, Multimeters, Function Generators, JTAG Debuggers, Logic Analyzers

TECHNICAL PROJECTS

I/O Interfacing in Assembly Language | Assembly

April 2024 - May 2024

- Designed and implemented an embedded system utilizing the Nios II processor and DE1-SoC platform.
- Developed an assembly language program to control a seven-segment display, which incremented and decremented a counter upon the press of a pushbutton.
- Enhanced the initial assembly design through the implementation of a wraparound counter feature which enabled seamless cycling between incrementation and decrementation on the seven-segment display.

Breathing Rate Detection System | MATLAB

April 2023 - May 2023

- Used an Arduino Uno microcontroller and the LM61 temperature sensor to build a breathing rate monitor to warn of a potential acute respiratory infection in a child aged 11 months to 5 years.
- Created a low pass, bandpass, and high pass filter in MATLAB to detect different breathing rates as well as any abnormal conditions.
- Documented the monitoring system in an IEEE journal format paper as well as provided an in-lab demonstration of the functional system with real-time data.

Carpool Reservation System | C++

August 2022 – November 2022

- Collaborated with a team member to successfully design, code, and thoroughly test a carpool reservation system tailored for RIT's Dodgeball team.
- Utilized a hierarchical approach and leveraged user-defined libraries to encapsulate header files to ensure modularity and maintainability of code.
- Included advanced data structures such as lists for flexible passenger management and vectors for efficient data storage and retrieval.
- Maintained clear and consistent documentation to facilitate readability and maintainability of the codebase.

Microcontroller Systems Robot | C

January 2022 - May 2022

- Programmed in C for a robot using the Texas Instrument MSP432 microcontroller.
- Utilized state machine architecture to streamline logic flow, enhance modularity, and improve overall system reliability.
- Ensured seamless integration of Bluetooth communication and sensor data processing, which enabled responsive and autonomous functionality in diverse environments.
- Engineered smooth motion control utilizing PWM signaling, which enhanced the robot's navigation and operational efficiency.

EXPERIENCE

Rochester Institute of Technology, Rochester, NY | Student Worker

August 2020 – May 2021

- Provided food service in a high-volume cafeteria setting, servicing an average of 500 students per night.
- Demonstrated reliability and initiative by consistently exceeding service expectations and adapting to varied tasks, contributing to a positive dining experience for students and staff.

CLUBS/AWARDS:

- Society of Asian Scientists and Engineers
- RIT Presidential Scholar

August 2023 - Present
June 2020 - Present