Seth Gower

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Seeking Full Time employment for Digital Hardware Design. Starting June 2022.

Work Experience

Herrick Technology Laboratories: DSP Engineering Intern
Germantown, MD
February '21 - Present

- Develop VHDL for FPGA Applications targeting Software Defined Radios. FPGAs were used to have performant, modular systems.
- Development of High Speed Interfaces for SDR applications, including Forty Gigabit Ethernet. These interfaces supported high speed data transfer for customer applications.
- Develop applications in a fast paced environment, while meeting deadlines on products for customers.
- Development of FPGA designs and use of Matlab for design verification. Thorough verification practices showed functionality of design, including edge cases.

D3 Engineering: Embedded Software Engineering Intern
Rochester, NY
January - July '20

- Development of Embedded software for Advanced Driver Assistance Systems (ADAS) applications, using Texas Instruments TDA processors. These systems included safety systems, such as Surround View.
- Designed and developed an automated testing suite for a new product. These tests were performed on all new units of this product to ensure functionality.
- Showed ability to productively work in a remote capacity due to the COVID-19 pandemic.

RIT Computer Engineering Department: Teaching Assistant
Rochester, NY
August '18-December '20

- Assisted in Lab, teaching various lab classes and grading assignments throughout my time at RIT. This gave me experience mentoring students and teaching challenging concepts.

Education

Rochester Institute of Technology
Rochester, NY
Expected May '22

Bachelor of Science: Computer Engineering, 5 year program
GPA: 3.11 - Dean's List: Spring '19, Fall '20
Relevant Coursework:

- Reconfigurable Computing (CMPE-660): Learned Advanced Synchronous Digital Design concepts targeting a Xilinx Nexys A7 (Previously Nexys 4 DDR) development board.
- Interfacing Digital Electronics (CMPE-460): Used FRDM-K64 ARM board to interface with peripherals, to eventually build and program an autonomous race car. In Progress.

Skills

- **Languages:** C, VHDL, Matlab, Arm Assembly, Python, LaTeX, Bash, C++, Qt5, Java, Rust
- **Tools:** GNU/Linux tools and environment, Git, KiCad, Altera Quartus Suite, ModelSim, Xilinx Vivado
- **Hardware:** Soldering, Prototyping on breadboard, Hardware design on FPGA, Hardware Debugging
- **Professional Skills:** Public Speaking, Team Management, Ability to Work productively in a remote capacity

Projects

Small Scale Autonomous Race Car
Embedded C
August - December '20

Using a NXP/Freescale FRDM-K64 Embedded Development board, myself and a partner assembled and programmed an autonomous race car to compete in RIT's IDE Cup. Used embedded C to design to interface with a line scan camera to control motors and servos to quickly traverse a randomly designed track.

Pipelined MIPS Processor
VHDL
January - May '19

Created each stage of a MIPS processor, individually tested these stages. The processor was modeled and tested using VHDL and then implemented on to Basys 3 FPGA. The processor was tested by calculating 10 elements of the Fibonacci Sequence.

Organizations

- **Engineering House:** Special Interest House at RIT. Positions Held: Secretary. Active October '17 - May '19
- **Computer Science House:** Special Interest House at RIT. Active August '17 - May '18