Michael Zhao

weiyu.zhao@mail.utoronto.ca | 647-937-3485
https://www.linkedin.com/in/michaelwyzhao
github.com/michaelweiyuzhao

Skills

- **Proficient with:** C, C++, Verilog, C#, Python
- **Familiar with:** Perl, System Verilog, Java, MATLAB, Assembly

Experience

Design Verification and Digital Design Intern: June 2017 – Present

IoT Labs | *Istuary Innovation Group*

- Created UPF power intent and script to parse and generate future UPF files from a configuration file.
- Designed capture compare unit and implemented in Verilog for synthesis.
- Created basic UVM tests and sequences for testing hardware blocks.

Electrical Designer and Programmer: June 2016 - Present

Blue Sky Solar Racing | *University of Toronto*

- Designed temperature sensor and implemented driver in C on a ST microprocessor which shortened future hardware and software design cycles in this area by 20%.
- Wrote parser in C# to interface CAN data sent through radios allowing for quick interpretation of received frames and easy access for the rest of the system.

Research Assistant: March 2017 – Present

Civil Engineering Department | *University of Toronto*

- Developed customizable Python program automating SQL queries to aid data collection which resulted in repeated, similar queries being executed in 10% of original execution time.
- Webpage GUI hosted at michaelweiyuzhao.github.io/PCIHub for implementing decision trees as a calculator.

Projects

Remake of the Legend of Zelda (1986) in Verilog November 2016

- Collaborated with one other person to remake the original Legend of Zelda game on Altera's DE1-SoC FPGA that contained VGA display, enemy movement logic and combat.
- Used a FSM and combinational logic to implement game logic.
- Created skeleton code and test cases which allowed for modular design and debugging, which reduced total development time by 25%.

"Draw and Jump" Game in Assembly and C March 2017

- Implemented on Altera's DE1-SoC FPGA using the Nios-II soft processor and its instruction set.
- Single player game where the player jumps on platforms that can be drawn by the player with a mouse.
- Includes PS/2 mouse and keyboard controls and VGA display.