

Michael Zhao

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Education

BASc Electrical and Computer Engineering: University of Toronto St. George 2015 - 2019

Skills

- **Languages**
 - Proficient** Verilog, Python, C, C++, C#
 - Familiar** Perl, SystemVerilog, bash, Java, MATLAB
- **Tools** Synopsys VCS, Spyglass Lint, JIRA, Vim, Django/Flask

Experience

Digital Design and Verification Intern | Istuary Innovation Group June 2017 – September 2017
UPF, Verilog, SystemVerilog, Perl, UVM, VCS, Lint

- Created UPF power intent and Perl script to automate UPF generation from a configuration file.
- Designed Capture/Compare Unit and implemented in Verilog for synthesis.
- Tested power intent and small hardware blocks using UVM and SystemVerilog Assertions.

Electrical Designer and Programmer | Blue Sky Solar Racing June 2016 – April 2017
C, C#

- Designed temperature sensor and implemented driver in C on a ST microprocessor.
- Wrote parser in C# to interface CAN data sent through radios allowing quick access for the rest of the system.

Research Assistant | Civil Engineering Department March 2017 – Present
Python, Django, HTML/CSS/JS, Bootstrap

- 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.
- Developed Web GUI hosted at <https://madeh.github.io> for implementing decision trees as a calculator.

Projects

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

- Used Finite State Machine and combinational logic to implement game logic.
- Included 6bit VGA graphics, combat and unit collision.

EasyGIS Map program in C++ February 2017
C++, EasyGL(X11)

- Designed and created modular GUI using X11 based graphics library.
- Applied Object Oriented Programming paradigms to create reusable and maintainable source code.
- Implemented and optimized A* and Dijkstra's algorithms cutting runtime to 50%.