

## Yunshan (Richard) Yan

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This file was compiled at Sat 26<sup>th</sup> Jan, 2019 at 3:14pm EST.

### EDUCATION

**Queen's University**, Canada

*Master of Applied Science, Department of Electrical and Computer Engineering  
Expected May 2019*

**Queen's University**, Canada

*Bachelor of Applied Science, Department of Electrical and Computer Engineering  
GPA: CGPA: 3.85/4.2*

### TECHNICAL SKILLS

**Programming Languages :** Python, Java ,JavaScript, C, C++, Haskell, Coq, Scheme, TXL

**Database :** MySQL

**General :** Embedded Systems, Data Mining, Algorithm.

### EXPERIENCE

**Queen's University : Research Assistance**

**Sept. 18 - Dec. 18**

Research Assistance in Software Reengineering Research Group.

url: <http://post.queensu.ca/zouy/> (The server does not have HTTPS capability)

**Queen's University : Graduate Teaching Assistance**

**Sept. 18 - Dec. 18**

Graduate TA for course ELEC 278: Data Structures. Duties involved supervising lab activities, proctoring quizzes, marking final exams, and answer student questions.

**Queen's University : Undergraduate Teaching Assistance**  
**18**

**Jan. 18 - Apr.**

Undergraduate TA for course ELEC 274: Computer Architecture. Duties involved supervising lab activities and answer student questions.

**Queen's University : Undergraduate Teaching Assistance**  
**17**

**Sept. 17 - Dec.**

Undergraduate TA for course ELEC 278: Data Structures. Duties involved supervising lab activities and answer student questions.

**Queen's University : Undergraduate Teaching Assistance**  
**17**

**Jan. 17 - Apr.**

Undergraduate TA for course ELEC 274: Computer Architecture. Duties involved supervising lab activities and answer student questions.

**Queen's University : Undergraduate Teaching Assistance**  
**16**

**Sept. 16 - Dec.**

Undergraduate TA for course ELEC 221: Electric Circuits. Duties involved supervising lab activities, preparing assignment solutions, and answer student questions.

### PROJECTS

**Networking Support for Altera DE10 Board**

**Sept. 2017 - Apr. 2018**

Networking capability was added to the Terasic DE10 board, a embedded system build around the Intel System-on-Chip(SoC) FPGA, by interfacing it to a WIZ812MJ, a commercially available network module, through both SPI and parallel bus communication interface. This project is awarded as the Students' Choice: The Best Engineering Capstone Project.

- **Technology/Tools:** FPGA, C, Nios II assembly, Altera Quartus II, TCP/IP stack.

### **FPGA Implementation of the MiniSRC processor**

**Jan. - Apr. 2017**

The RISC style MiniSRC processor was implemented on Altera FPGA using VHDL language. In addition, an assembler was built to convert MiniSRC assembly language to Altera FPGA Memory Initialization File (.mif).

- **Technology/Tools:** VHDL, FPGA, Altera Quartus II.

### **Compiler for Programming Language Garnet**

**Sep - Dec 2016**

A compiler was developed for the programming language Garnet: a Ruby/Pascal like language. All four phases of the compiler (i.e., lexing, parsing, semantic analyzing, and code generating) are implemented in the S/SL language (Syntax/Semantic Language) (Holt, Richard C., James R. Cordy, and David B. Wortman. "An introduction to S/SL: Syntax/semantic language." ACM Transactions on Programming Languages and Systems (TOPLAS) 4.2 (1982): 149-178.)

- **Technology/Tools:** S/SL, Linux Intel x86 assembly, Theories of Formal Languages and Automata.

### **CERTIFICATION.**

- **Machine Learning** by University of Stanford on *Coursera*

Verify : <https://www.coursera.org/account/accomplishments/certificate/QCXVU9KDVW59>

### **RELEVANT COURSES**

- Digital Systems • Data Structures • Computer Architecture
- Mechatronics Project • Fundamentals of Software Development
- Algorithms • Probability & Random Processes
- Microprocessor Systems • Operating Systems • Software Specifications
- Database Management Systems • Computer Graphics
- Programming Language Processor • Digital Systems Engineering
- Computer System Architecture • Computability & Complexity
- Formal Methods In Software Engineering • Image Processing & Computer Vision
- Number Theory & Cryptography • Computer Networks
- Control Of Discrete-Event Systems • Computational Complexity
- Mining Software Engineering Data • Software Reengineering
- Design recovery and Automated Evolution

### **Awards**

- Queen's University Excellence Scholarship, 2014
- Dean's Scholar, 2015, 2016, 2017, 2018
- Ho Ming Tai Memorial Scholarship, 2015, 2016, 2017, 2018
- Teaching Assistant of the Year, 2017
- Students' Choice: The Best Engineering Capstone Project, 2018