

# **XIAO (SIMON) YU**

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## **Address**

1280 Main Street West  
Hamilton ON L8S 4L7 CANADA  
905-525-9140

## **EDUCATION**

2017 - present

### **Master of Engineering (M.Eng.), Computing and Software**

McMaster University, Hamilton ON

Thesis: *Generation of Automatic Test Cases with Mutation Analysis  
and Hybrid Genetic Algorithm*

Supervisor: Dr. Erlich Bachman

2013 - 2017

### **Bachelor of Engineering, Software Engineering (Co-op)**

McMaster University, Hamilton ON

## **HONOURS**

2017

McMaster University Honour Award

2016

Motorola Software Engineering Scholarship

## **RESEARCH AND TEACHING INTERESTS**

- Scientific Computing and Optimization
- Theory and Methodologies of Computation
- Security, Privacy, and Data Analytics

## **RESEARCH EXPERIENCE**

2017 - present

### **Graduate Student Research Assistant, McMaster University**

- Examine the Generation of Automatic Test Cases with Mutation Analysis and Hybrid Genetic Algorithm
- Conducted research under the supervision of Dr. Erlich Bachman

2016

### **Research Assistant, McMaster University**

- Researched and developed algorithms to obtain data from a wireless sensor network
- Solved deficiencies in the data centre by analyzing root causes within the algorithm and applying known issues to failure prediction model
- Conducted research under the supervision of Prof. Andy Bernard

## XIAO (SIMON) YU

### TEACHING EXPERIENCE

2016 - 2017

**Teaching Assistant**, McMaster University

Courses title: Data Structures and Algorithms (2C03)

- Organized tutorial discussions on topics relating to data structures and algorithms
- Explained difficult concepts in stacks, queues, hash tables, and binary trees
- Provided guidance to level two undergraduate students for the course assignments and projects
- Mentored and counselled students experiencing difficulties in the course
- Gained familiarity with algorithmic design strategies; correctness and performance analysis

### ACADEMIC INVOLVEMENT

2016 – present

**Vice President**, Software Engineering Club

McMaster University, Hamilton ON

- Planned, Coordinated and recruited committees to manage a series of club meetings and programs
- Acted as a liaison between the club President and committee members

2015 - 2016

**Controls Development Lead**, McMaster EcoCAR 3 Team

McMaster University, Hamilton ON

- Improved the design of the vehicle by troubleshooting controls in MATLAB and Simulink

### PROFESSIONAL EXPERIENCE

2016

**Special Projects Coordinator**, School of Engineering Practice & Technology, McMaster University

- Streamlined the course and midterm scheduling process by creating a software in C and C# to detect conflicts with course and room timetables
- Demonstrated strong communication skills while training Program Administrators on the software's functionalities
- Enhanced organizational skills by systemizing various tasks involved in ensuring projects be completed within the timeline

### PUBLICATIONS - REPORTS

Yu, Xiao. (2018). *“Creating a Structural Model That Permits Automatic Manipulation”* Report prepared for Dr. Erlich Bachman. Hamilton: McMaster University.

Yu, Xiao. (2018). *“Obtaining Data Through Wireless Sensor Networks”* Report prepared for Prof. Andy Bernard. Hamilton: McMaster University.

## XIAO (SIMON) YU

### TECHNICAL SKILLS

#### **Programming:**

MATLAB, Simulink, Bash, Ruby, SQL, HTML, C, C++, CSS, C#, XML, Java, Python, API

#### **Database:**

Oracle, MySQL, MongoDB, IBM, DB2, Hana, SAP

#### **Software:**

Autodesk Inventor, Maple, MapleSim, Linux/Unix, Arduino, MS Office Suite, Adobe Creative Suite

### CONFERENCES ATTENDED

2019	International Conference of Software Engineering, Montreal QC
2018	Canadian University Software Engineering Conference, Montreal QC

### MEMBERSHIPS

2013 – present	<b>Member</b> , Ontario Society of Professional Engineers
2013 – present	<b>Member</b> , Professional Engineers Ontario

### LANGUAGES

Bilingual, Mandarin and English

### REFERENCES

**Dr. Erlich Bachman** (Thesis Supervisor)  
Faculty of Engineering, McMaster University  
905-525-9140 ext. 555      [disneywa@mcmaster.ca](mailto:disneywa@mcmaster.ca)

**Prof. Andy Bernard** (Thesis Committee Member)  
Faculty of Engineering, McMaster University  
905-525-9140 ext. 554      [bernardan@mcmaster.ca](mailto:bernardan@mcmaster.ca)

**Prof. Leslie Knope** (Teaching Supervisor)  
Faculty of Engineering, McMaster University  
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