

Alex Madrzyk

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EDUCATION

University of Western Ontario (3.98/4.00 GPA) **Graduation: May 2018**

Honors Double Major: BSc in Medical and Computer Sciences Candidate | Certificate in Practical French

- **Past Courses:** Computer Programming (Python, Java and C), Machine Structures, Discrete Mathematics
- **Current Courses:** Applied Logic, Data Structures and Algorithms, Software and Systems Programming

Harvard University – edX Extension School

Sept. 2016 – Dec. 2016

- Comprehensive introduction to Computer Science, including algorithms, security, and resource management

University of California, Berkeley

Jun. 2016 – Aug. 2016

- Intensive eight-week summer sessions. Studied computer architecture and analysis of big data principles

AWARDS

- **Best Hack to Improve Patient Wait Times** – awarded for TimeToCare project at Hack Western 3
- **Magnet Forensics: Cracking the Code Challenge, Third Place** – digital decryption challenge finalist
- **Queen Elizabeth II Silver Jubilee Endowment Fund** – only student nominated by the university, and one of three students in Canada to win the award. Selection based on academic achievement, leadership roles and volunteer work
- **Robert and Ruth Lumsden Scholarship in Science** – awarded for outstanding academic achievement
- **Scholarship of Excellence, Student of Distinction, Western Scholars, Dean's Honor Roll** 2014–Present

TECHNICAL SKILLS

TOOLS

Eclipse · Adobe Creative Suite · Logisim · Xcode
Git · PhpStorm · UNIX/Terminal · Bootstrap

LANGUAGES | *in order of proficiency*

Java · C · Python · HTML/CSS · JavaScript ·
Shell · SQL · Swift · Arduino GPIO Library

PROJECTS

Western French Club iOS App – Swift, Facebook API, SwiftJSON, MySQL, PHP **Nov. 2016 – Present**

- Notifies French Club members on future club events. The app's TableView is populated using a MySQL database and PHP, while the like and share buttons are implemented using the Facebook API

TimeToCare.me – HTML/CSS, JavaScript, Twitter Bootstrap, Google Maps API

Oct. 2016

- Developed a new metric that helps patients minimize their time to treatment
- The website directs patient streams to hospitals based on the sum of wait times at nearby emergency rooms, and travel times calculated using the Google Maps API

3D Depth Map Optimization – C, OpenMP API, Intel SSE Intrinsics

Aug. 2016

- Optimized an image depth-map generator, which resulted an average of 6x speedup using OpenMP to multithread the code, and Intel SSE intrinsics to unroll the loops and perform 4 operations at a time

MIPS Assembler and Linker – C, MIPS ISA, MARS (MIPS Simulator)

Jun. 2016

- Built a compiler that translates MIPS to machine code using a symbol table to store name-address mappings

EXPERIENCE

Developers' Foundation

Nov. 2016 – Present

Web Developer

- Translated non-profit organizations' design proposals into fully-responsive and user-friendly websites
- Designed click-and-run bootstrap templates for other developers, reducing time from concept to release phase

University of Western Ontario – Interdisciplinary Media Center

Aug. 2016 – Present

IT Technical Support / Digital Media Equipment Consultant

- Collaborated with the Dean of the Faculty of Music by assisting in classes and workshops about technological integration in education for graduate students in teacher's college

EVENTS/CLUBS

Microsoft Coding Challenge · Communitech Design Challenge · HackWestern3 · Western Cyber Security / Hack Team