

# 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

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## 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**

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## 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

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## PROJECTS

**Western French Club iOS App – Swift, Facebook API, SwiftyJSON, 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

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## 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

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## EVENTS/CLUBS

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