

# FRÉDÉRIC LAFRANCE

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GitHub: lafrancef

Developer, autodidact and student. Currently looking for an internship next summer in a challenging technical environment.

## EDUCATION

2016-2018      Master of Science ETH in Computer Science — ETH Zürich  
Zürich,  
Switzerland      *In progress*

2013-2016      Bachelor of Arts — McGill University  
Montréal, Canada      Major: Computer Science · GPA: 3.93 / 4 · Dean's honor list  
Winter 2015: Exchange at the National University of Singapore.

## WORK EXPERIENCE

Summer 2015      Software Developer Intern, Microsoft  
Redmond, USA      Designed and created a module to publish all new releases of the Microsoft Office apps to the Windows Store. As a consequence, streamlined the publishing process, saving days of work for every release. **Publicly released** and **open-sourced** the module.  
*TypeScript*

Summer 2015      Software Developer Intern, Microsoft  
Redmond, USA      Extended an automated penetration testing tool by implementing a debugging wrapper for Android applications. Significantly improved the quality of security bug reports filed to product engineers.  
*C#*

Summer 2014      Research Assistant, McGill University  
Montréal, Canada      Contributed to the network analysis library **Zen** by implementing algorithms to detect communities in networks. Designed and implemented a topic-modeling tool for the lab members.  
*Python, Cython*

Summer 2013      Software Developer Intern, Thales Canada  
Québec City,  
Canada      Researched and developed solutions to automatically control Android VMs, in order to perform behavioral analysis for malware detection. Co-authored two articles detailing our architecture (**first** and **second**).  
*Java, C*

Spring 2013      Research Assistant, Université Lyon I  
Lyon, France      Developed a high-performance app for marker-less augmented reality on Android devices. Tied the app to a web-based CMS for content synchronization and download.  
*Java, OpenGL*

## PROJECTS

### 2016 Goto — A Go “Lite” compiler

Developed a compiler for a subset of Go called GoLite, targeting x86 assembly. Implemented large parts of the parser and weeder. Designed and implemented the intermediate representation between GoLite and assembly. Wrote the register allocator and GoLite runtime. Won the **best compiler award** in the class ([report](#)).

*Haskell, C · Academic project*

### 2013 – 2014 Member of McGill Robotics — Software Division

Helped create an autonomous submarine for the international RoboSub competition. Developed several computer vision algorithms for object detection during the competition (obstacles, markers). Gave **talks** to present the team and its projects during outreach events.

*C++, OpenCV*

## OTHER INFORMATION

### *Awards*

2016 · Master Scholarship Programme award from ETH Zürich

2014 · Mary Coppin excellence scholarship from McGill University

2013 · Award for academic excellence from the Fondation du Cégep de Sainte-Foy (Québec City, Canada)

2012 · Honorable mention at the Canadian Computing Competition, senior level (top 2 in eastern Canada)

### *Languages*

French · Mother tongue

English · Fluent

### *Interests*

Electric bass guitar · Travel · Linguistics and cognitive science