

# Justin Michaud

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## Skills

- Experience with Java and Web development, some experience with TCP and UDP network protocols, Android, Python, PHP, SQL, Linux, OpenGL, Arduino, have used C++, Racket (lisp)
- Experience collecting and iterating upon requirements from non-technical users

## Employment History

Sudbury Action Centre for Youth                      **Software Development Contractor**                      Aug. – Sept. 2016

- Developed/deployed web application to track clients, donations and services using Python and Django; eliminated a labour shift, collected statistics to seek funding and find areas to improve
- Collected requirements and feedback to ensure business value was created

YMCA of Sudbury                      **Software Developer & I.T. Assistant**                      June 2014 to Sept. 2016

- Developed open-source remote support tool using Java, Netty and UDP hole-punching to tunnel TCP connections without port forwarding; Used less data, was easier to use than existing solutions
- Built public job board using PHP and MySQL; used by hundreds of clients, ~20 job counsellors
  - Introduced the use of Twig templates to separate display and business logic and eliminate XSS and CSRF vulnerabilities, prepared queries to eliminate SQL injection vulnerabilities
- Introduced git and basic documentation practices to development workflow
- Wrote Python scripts to manage public resource Linux computers, with guest sessions, automatic logout, and remote management; reduced maintenance costs, increased security, and enforced usage policies
- Created web application that tracked camper purchases; saved ~20 hours per week in repetitive and error-prone calculations, produced actionable statistics

## Interests / Projects

Everything from playing oboe in the Waterloo Orchestra to messing around with lasers at Hack the North to playing games on my Commodore 64

- Work in progress: Contributed Gesture Typing feature to the AnySoftKeyboard project to create the *first Open Source swipe keyboard* for Android
  - Generates simulated paths for possible words and compares them to the user input
- Created a shooter game for Google Cardboard with Java and OpenGL that uses BoofCV running on a laptop to track the position of player's head, allowing them to shoot enemies and dodge obstacles
- Work in progress: Arduino project to create cheap VR motion tracking, using mirrors to scan line-lasers across the room and IR to synchronize the emitter/receiver
- An Open Source Android transit application using the Sudbury Open Data API, available on F-Droid

More projects and source code available at <http://justinmichaud.com>

## Education

September 2016 to Present – Candidate for Bachelor of Computer Science at the University of Waterloo