

Justin Michaud

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justinmichaud.com

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TECHNOLOGIES

- Java
- Scala
- Rust
- C++
- MySQL
- Kafka
- Android
- OpenGL

INTERESTS

- Free & Open Source Software
- Distributed Systems
- Graphics
- Emulation
- Databases
- Rust

HOBBIES

- Oboe with UWaterloo Orchestra
- Playing with my Commodore 64
- Biking and Unicycling (barely)
- Collecting old Macs

EDUCATION

UNIVERSITY OF WATERLOO 2B COMPUTER SCIENCE

Sept 2016 - Present, Waterloo, ON

EXPERIENCE

PAGERDUTY, SOFTWARE ENGINEERING INTERN

San Francisco, CA

Kafka, Scala, Akka | Jan 2018 – April 2018

- Developed replacement for service that published records to Kafka from Mysql, eliminating database locking and load
- Contributed recovery features/bugfixes to open source Maxwell Mysql binlog-to-json publisher, built Scala/Akka Streams service to allow filtering and fanout of messages to multiple clusters
- Added OAuth support and other improvements to new Scala/Akka backend for frontend service

PAGERDUTY, SOFTWARE ENGINEERING INTERN

Toronto, ON

Ruby, Mysql, EmberJS | May 2017 – Aug 2017

- Optimized Mysql queries, added indexes and denormalized columns allowing incidents dashboard to support millions of incidents, without any maintenance downtime
- Implemented incident priority editing and mobile support using ruby, EmberJS and iOS/Android SDKs

YMCA, SOFTWARE DEVELOPMENT ASSISTANT

Jun 2014 – Aug 2016 |

Sudbury, ON

- Built low-bandwidth remote support tool using UDP hole-punching to tunnel TCP connections without port forwarding

SELECTED PROJECTS

More at justinmichaud.com

ANYSOFTKEYBOARD CONTRIBUTOR

Java, C++, Android, JNI

- Contributed gesture typing feature to create first open source swipe keyboard for Android
- Compares input path to simulated paths, measuring distance along path to find most likely word

RUST NES EMULATOR

Rust, 6502 ASM

- Created NES emulator capable of playing Super Mario Bros. and Donkey Kong; Passes NESTest test rom
- Included game modifications not possible on original hardware by hooking into memory reads/writes and import/export support for Super Mario Bros. levels

GLIDEN64

C++, OpenGL

- Created patch adding stereo rendering and google cardboard support to GlideN64 Nintendo 64 graphics plugin
- After projection matrix is applied, "untransforms" vertices to apply eye translation, avoiding toe-in artifacts

VR SPACE SHOOTER

Java, OpenGL, BoofCV

- Google Cardboard shooter game using head tracking to allow player to shoot enemies and dodge obstacles
- Uses OpenGL for rendering, BoofCV on a laptop to track the position of player's head