Justin Michaud

hello@justinmichaud.com | justinmichaud.com | github.com/justinmichaud

SKILLS

Know: Java, Scala, Rust, C++, MySQL, Kafka, Android
Have used: OpenGL, Python, Ruby, Percona XtraDB, Arduino, Javascript/ES6, EmberJS, ElasticSearch, Elixir

EXPERIENCE

PAGERDUTY, Software Engineering Intern   Kafka, Scala, Akka | Jan 2018 – April 2018 | San Francisco, CA
- Developed service to transactionally publish records to Kafka from Mysql, enabling teams to make microservices outside monolith using existing transactions
- Submitted bugfixes and binlog skipping feature to open-source Maxwell Mysql binlog update publisher
- Built service using Scala/Akka Streams to enable filtering, publishing of Maxwell messages to multiple Kafka clusters
- Added OAuth support to backend for frontend service written with Scala and Akka Http, used by new services to avoid dependency on monolith

PAGERDUTY, Software Engineering Intern   Ruby, Mysql, EmberJS | May 2017 – Aug 2017 | Toronto, ON
- Optimized Mysql queries, added indexes and denormalized columns allowing incidents dashboard to support millions of incidents without any downtime
- Implemented incident priority editing and mobile support using ruby, EmberJS and iOS/Android SDKs

YMCA, Software Development Assistant   Php, Java | 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
- Contributed gesture typing feature to create first open source swipe keyboard for Android
- Compares input paths to simulated paths to find most likely word

RUST NES EMULATOR   Rust, 6502 ASM
- Created NES emulator capable of playing Super Mario Bros., Donkey Kong
- Included game modifications not possible on original hardware, import/export support for Super Mario Bros. levels

GLIDEN64 CONTRIBUTOR   C++, OpenGL
- Contributed side-by-side stereoscopic rendering support to GlideN64 Nintendo 64 emulator
- After projection matrix is applied, "untransforms" vertices to apply eye translation, avoiding toe-in artifacts

HEAD TRACKING 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 with printed fiducial

OTHER   Scala, Rust, C
- What is a monad? (Tech Talk + Scala Worksheets)   • Torn-RNN Super Mario Bros Level Generation (Blog post)
- Pagerduty Doom Mod - Deadliest Incident Management Solution (view and resolve incidents as enemies in-game)

EDUCATION

UNIVERSITY OF WATERLOO, 2B Computer Science   Sept 2016 - Present | Waterloo, ON

INTERESTS

Oboe with Orchestra@UWaterloo and UW concert band club, playing games on my Commodore 64, collecting old Macs