(416) 912-1123
RAFAEL@RAFKHAN.ME

RAFAEL KHAN

SUMMARY

Writing software is without question my greatest passion, hobby, and achievement (making music is a close second though). I'm a developer by trade, with over 8 years of professional experience, many more as a hobby though. My interests vary from **functional programming** to making **audio software**, and building **electronics**.

I am also the founder of Okay Synthesizer, a music hardware company.

SKILLS

— Proficient in modern **Javascript & TypeScript development**
  ◆ 6+ years of **NodeJS** experience
  ◆ **Native + JavaScript** integration experience with WebAssembly
  ◆ Extensive experience developing **frontend** applications in React
— UNIX fan. Knowledge of DevOps automation, **Docker, AWS and Bash**
— Various SQL & NoSQL databases, most notably **MySQL, PostgreSQL, MongoDB, DynamoDB, and Redis**
— **Agile** process leadership
— Services built on **HTTP**, such as **REST / SOAP APIs**
— Basic **electronics** engineering, and firmware development in **C++**
— A multitude of programming languages, I'm fairly comfortable with picking up a new one if I have to. I've even done quite a bit of LISP, so throw it at me, it's cool.

EXPERIENCE

Okay Synthesizer, Toronto — *Title: All of them (lol, sorry)*
(*https://okaysynthesizer.com/*)

October 2020 – **Present**
— Okay Synthesizer is my open source boutique **synthesizer manufacturing** company. We specialize in **digital synthesizers** compatible with analog music hardware in the Eurorack format. We have currently **shipped one product named Lowstepper** (product page / github page).
— Compiled **C++ to WASM/JavaScript** to create a **ReactJS** based interactive web demo of the algorithms provided by LowStepper (*Side note: I was able to use the web demo to do rapid iteration on C++ firmware without having to flash code to hardware*).
— Marketed, packed, shipped, and assembled the product.
— Customized shopify template to desired specifications for online store

SSENSE, Remote — *Software Developer (Backend) L3*
(*https://www.ssense.com/*)

February 2021 – **Present**

- Work with existing, and new **Java and Javascript microservices** to integrate warehouse functionalities into the SSENSE platform
- *Worked from day 0 on next-generation logistics platform to facilitate the delivery of goods to customers. Developed **scalable NodeJS applications** on **AWS Lambda and DynamoDB** to handle the shipment billions of dollars of customer orders. Integrated global carriers (FedEx, UPS, DHL, etc.), with warehouse hardware infrastructure.*
- *Coached junior engineers on **good code practices, architecture / design**, and otherwise supported their growth during the development of this project*
- *Performed cross functional integration **planning and testing** to ensure the successful delivery of our carrier management services*

Sensibill, Toronto — *Senior API Engineer*

February 2019 – Present

- Design and implement API features on **NodeJS** with **TypeScript** and **MongoDB** to support the core product
- Developed new "Extraction as a Service" product from the ground up, originally written in **Go/MySQL**, but later ported to **TypeScript/Mongo** for integration with the rest of our ecosystem
- Lead planning and execution of large **platform migrations** and **test strategies**
- Assess and address security vulnerabilities and bugs in API code
- Work with outside consultants to develop **ReactJS** based Sensibill SDK and plan a **delivery strategy** to clients
- Integrate Sensibill web platform with **Swift** and **Kotlin** based internal SDKs

Ovandi, Toronto — *CTO & Co-Founder*

June 2017 – February 2019

- Technical leader of cannabis consumer electronics startup
- Built prototype hardware
- Wrote firmware with **HTTP** and **Bluetooth** interface in **C++**
- Designed and developed **react-native** and **NodeJS** applications to interface with the hardware
- Developed **technical strategy** in a resource-constrained business
- **Lead junior developers** to deliver features for the Ovandi platform and grow their skillset
- **Agile process leader**
- Iterated on the product with client feedback
- Lead the design team in **UX development** efforts

Mark43, New York/Toronto — *Software Engineer*

October 2016 – June 2017

- Build new features for the Cobalt law enforcement platform in **React & Redux** (https://www.mark43.com/rms/)
- Ensured backwards compatibility with existing backbone/knockout code
- Moved **Redux** related code to isolated modules for sharing across the Mark43 suite of tools

Rangle.io, Toronto — *Software Engineer*

March 2014 – October 2016

- Engaged in a number of **full-stack Javascript** consulting engagements
- Developed **Angular 1.x/React** applications from scratch, or extended existing client codebases
- Used **NodeJS + Express/KoaJS** to develop a wide variety of REST APIs, backing our various frontend applications

Exclaim Solutions, Toronto — *Frontend Developer*

June 2013 – September 2013

- Consulted design team to optimize existing desktop designs for **responsive mobile development**
- Converted PSD designs to **HTML/CSS/PHP** for integration with internal CMS

Hanen Center, Toronto — *Software Developer*

June 2012 – September 2012

- Used **Python** to perform analysis of regional sales data from Dynamics CRM
- Created heat map **visualizations** of their sales using **Javascript**

PROJECTS

Check out my github!

React Techno — *HTML5 time-synced beat making*

https://github.com/rafkhan/react-techno

- Use **WebAudio** to make techno beats from synchronized loops!

WebDJ — *HTML5 DJing*

https://github.com/rafkhan/webdj

Hack the north 2014

- **WebAudio** based sound manipulation tools
- **HTML5 Canvas** audio visualizations
- WebRTC live streaming of DJ set
- **MIDI** integration for turntable compatibility

Other Info

- Currently building **eurorack synthesizer modules** on my free time
- I have a *strong preference* to solve problems with **functional programming**
- Actively using **Javascript** for nearly 10 years
- *I lost my TV remote while writing this, there are no buttons, so I turned it on with an* **Arduino** *instead*