

# JACK MICHAUD

## Full Stack Engineer

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## EXPERIENCE

### Full Stack Engineer

Knock ( knockcrm.com )

📅 Jun 2020 – Present

📍 (Remote) Seattle, WA

- Improved email deliverability for CRM platform, reducing bounced emails from 10k/hr to 40/hr
- Developed system design documents for company-wide efforts
- Shepherded startup culture with little process to modern CI/CD

### Full Stack Engineer

Metascouter, Inc ( metascouter.gg )

📅 May 2018 – Jun 2020

📍 (Remote) Seattle, WA

- Constructed APIs (REST, GraphQL) and broadcast graphics for integrating data into major esports broadcasts.
- Designed and developed web infrastructure while coordinating with remote team.
- Created real-time data pipeline using MQTT, queueing, and CloudFormation to ingest data from computer vision software.
- Implemented serverless AWS architecture with DynamoDB, Lambda, and API gateway with GraphQL interface.
- Carried out growth marketing experiments with AdWords and Google Analytics
- Started closed beta engaging with 5 end users actively using our product
- Released 1.0 software after iterating on feedback

### Software Development Co-Op

Solaria Labs ( solarialabs.com )

📅 Jul 2018 – Dec 2018

📍 Boston, MA

- Implemented serverless AWS data pipeline and generic CloudFormation template generation.
- Collaborated actively with 2-3 teams writing Python and JS backend code, JS frontend, building CI pipelines, and integrating said data pipeline.
- Evaluated open source and commercial business data for reliability against ground truth.

### Founding Partner

Harrow Search ( harrowsearch.com )

📅 Oct 2015 – Jul 2019

📍 Manchester, NH

- Established LLC for a website that displays analytics from data scraped from YouTube, Twitter, Facebook, and Instagram.
- Created web application stack with Django, ReactJS, Selenium, and Docker. Implemented CI/CD in Gitlab.
- Supervised and directed three temporary contractors.

## EDUCATION

### Northeastern University

B.S. in Computer Science

📅 Graduated: May 2020

- **Software Development:** Developed Software Engineering best practices (SRS documents, Scrum/Agile, testing)
- **Large Scale Parallel Data Processing:** Learned to design efficient algorithms in Hadoop and Spark
- **Systems Security:** Learned to mitigate operating system security in embedded, mobile, and desktop devices (RBAC, secure execution, chain of trust)

## SKILLS

### Languages

Python

TypeScript/JavaScript

Rust

Java

### Tools

Infrastructure as Code (Terraform)

Docker

Vim

CI/CD (Gitlab, CircleCI, Bamboo, Jenkins)

PostgreSQL

Webpack

## INTERESTS/ACTIVITIES

🏠 Self-hosted services and home lab

🎵 DJing and Music Production

🔧 Hacking and Penetration Testing

🚩 Collegiate Cyber Defence Club (CCDC)

❤️ Hiking

# PROJECTS

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## Rust Discord Bot

<https://github.com/jack-michaud/portfolio>

- A bot that interacts with Discord's low level websocket API
- Written to be reliable (99% SLA) and configurable (through rule based DSL)
- Powers personal entertainment for chat room; manages Minecraft server, downloads videos, and performs reverse image searches on uploaded images.

## Portfolio Site

<https://github.com/jack-michaud/portfolio>

- Personal portfolio - <https://portfolio.lomz.me>
- JAMStack site built with Next.js
- Markdown blog posts statically rendered

## PythonWebsocketRCE

<https://github.com/jack-michaud/PythonWebsocketRCE>

- Created a CLI for controlling captive JS and bash clients over a network.
- Designed an API for running distributed programs and for remotely executing code.

## WiFi Beacon Detection

<https://github.com/jack-michaud/wifi-beacon-detect>

- Created CLI that uses a wireless interface in monitor mode to find nearby probe requests.
- Learned to integrate with the LiFX Light Bulb API to turn on when certain probes are detected (e.g. if my phone is nearby, my light will turn on).