JACK MICHAUD

Full Stack Engineer

@ jack@lomz.me   ⦿ Seattle, WA   🔗 portfolio.lomz.me   in linkedin.com/in/jack-michaud   ○ github.com/jack-michaud

I am a software craftsman who derives joy from building things that make an impact.
As an engineer, my edict is to write clean, resilient, and testable code while monitoring the trade-off for speed.
As a leader, I lead by example and elevate the best qualities in my teammates.
My next career step is to find a company that makes the greatest impact with an eye towards ethics.

EXPERIENCE

Senior Software Engineer

PairTree (pairtreefamily.com)

📅 Jul 2021 – Present   ⦿ (Remote) Seattle, WA

- Planned and executed a full stack migration to new infrastructure in a month with no downtime
- Responsible for tech stack technical deep dives to inform decision making in early-stage application with the information we have available.
- Managing two high velocity teams; one maintains a legacy PHP/Laravel application, and one building a new Flutter + Python application
- Championing and evangelizing the use of writing and documentation for our remote team

Full Stack Engineer

Knock (knockcrm.com)

📅 Jun 2020 – Jul 2021   ⦿ (Remote) Seattle, WA

- Hacked on CRM application with legacy Python 2 and AngularJS (developed plans to modernization into Python 3 microservices).
- Designed, planned, wrote, and deployed scalable email service. Handled 5+ GB of data per minute with 0 downtime since launching in November 2021.
- Created canary Terraform module for safely launching changes to test with production traffic
- Developed system design documents guiding company-wide efforts for modern Terraform and Jenkins deployments (and adopting the canary module).
- Reviewed technical designs from throughout the org.

Full Stack Engineer

Metascouter, Inc (metascouter.gg)

📅 May 2018 – Jun 2020   ⦿ (Remote) Seattle, WA

- Constructed APIs (REST, GraphQL) and broadcast graphics (ReactJS) for integrating data into major esports broadcasts.
- Designed and developed full stack infrastructure while coordinating with remote team.
- Created real-time AI data pipeline using MQTT, Protobuf, and queueing to ingest data from custom computer vision models.
- Implemented serverless AWS architecture with DynamoDB, Lambda, and API gateway with GraphQL interface.
- Carried out growth marketing experiments with AdWords and Google Analytics.

Only the most relevant work experience is shown. More work is available on my LinkedIn (link in header).

EDUCATION

Northeastern University

B.S. in Computer Science

📅 Graduated: May 2020

- **Networking and Distributed Systems**: Implemented custom distributed systems like Raft and a custom TCP implementation
- **Software Development**: Developing software usinsg 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)

RELEVANT SKILLS

Languages

Python   TypeScript/JavaScript   Golang   Rust   Java

Tools

Terraform & CDK   Docker   CI/CD (GitHub Actions, Jenkins, CircleCI, Gitlab)   Vim   Emacs   GNU/Linux

Skills In Development

Solidity and Ethereum smart contracts   AI and Reinforcement Learning   Nix[OS]

INTERESTS/ACTIVITIES

- 🚩 Coach for Collegiate Cyber Defence Club (CCDC)
- 🗄 Self-hosted services and home lab
- 🎚 DJing and Music Production
- ♥ Hiking

PROJECTS

Ethereum Waves

https://github.com/jack-michaud/eth-wave

- A distributed web app that uses Ethereum smart contracts to store, create, and display "waves" from other users.
- The smart contract is written in Solidity and fully tested with Hardhat/Typescript
- The consumer is a strictly typed NextJS Typescript application (my portfolio site below).

Ephemeral Server (2021)

https://github.com/jack-michaud/ephemeral-server

- A Go Discord bot used to manage a self hosted Minecraft servers for as-needed hosting
- Uses Ansible and Terraform to provision and configure servers
- CI/CD with Semantic Release and multi-architecture docker builds

"Hoobastank" Data Collection (2021)

https://git.xskj.org/jack/hoobastank (Private)

- A Go program for data collection from UDP telemetry
- Collects telemetry data from Forza Horizon 5 and F1 (2021)
- Dockerized and deployed for private use with docker compose

Washington State Academy of Audiology (2020)

https://washingtonaudiology.org

- A JAMStack website built for my partner's professional organization
- Implements email automation for new members with a validation interface for confirming new members
- Automatically adds new members to constant contact email list
- Accepts payments for membership dues with Stripe

Rust Discord Bot (2020)

https://github.com/jack-michaud/gl2n

- 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 (2019)

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

- Personal portfolio - https://portfolio.lomz.me
- JAMStack site built with NextJS
- Markdown blog posts statically rendered

PythonWebsocketRCE (2018)

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.