Lucas Rahn

🔗 ljrahn.ca ✉ lucasrahn09@gmail.com 📞 1-(519)-535-8598 📍 Ontario, Canada in Linkedin ○ Github

Skills

Languages
Typescript, Bash, Python, Solidity.

Backend Development & Methodolgies
Express (NodeJS), Flask (Python). REST. WebSockets. Monolith, Modular Monolith. Event Driven. OOP, Procedural. Onion Architecture, Ports & Adapters.

Cloud Platforms & Services
GCP (Compute, Functions, K8S engine, Storage, Firebase Auth, Google Maps, Secrets/Configs), AWS (EC2, Lambda, S3, Route53, etc.), JIRA, Stripe (Connect & Identity), SendGrid, Sentry, PostHog, Uploadthing, Algolia, & more.

Frontend Development
React Ecosystem: Various react frameworks including NextJS, TanStack Start, Vite, React Native (Expo). State management: TanStack Query (async), Zustand UI: Tailwind CSS, Mantine, shadcn, Material UI.

DevOps & CI/CD & Databases
Docker, Coolify, Jenkins, Github Actions, Traefik, Nginx, RabbitMQ, Typesense, MongoDB, PostgreSQL, Redis.

Testing & QA
Vitest, Jest, Pytest, Selenium. Unit/Integration/Acceptance Tests.

Education

BASc Electrical Engineering, *University of Ottawa* ⧉   09/2017 – 04/2023 | Ottawa, Canada
Specialization in Control Systems Engineering.

Work Experience

Founder & CTO/Developer, *Lendus* ⧉   08/2023 – present | London, Canada
- Led the complete product lifecycle of Lendus, an online marketplace for commercial, industrial, instrumentation, and event/entertainment equipment rentals - product design, app development, testing, CI/CD, documentation.
- Levereged **Typescript** across the full stack. Engineered the backend as an **event driven, DDD modular monolith** (**Nodejs**/**Express**, **MongoDB** as a primary database, **Redis** for server side caching, **RabbitMQ** for async messaging and enabling event driven flows) ensuring scalability and facilitating agile, independent module development.
- Developed all of the platforms modules including account management, marketplace management, inventory systems, order processing, payment processing, chat, notifications, real time messaging (WebSockets), analytics, search.
- Frontend implemented using **Nextjs**, **Tanstack Query** for async state management, and **Mantine UI**.
- Implemented unit tests and integration tests using **Vitest** framework. The dependency injection container (**tsyringe**) made mocking, and interchanging infrastructure concerns simple.
- Used **Docker** and **Coolify** for CI/CD and infrastructure management, and integrated essential services including **Stripe Connect** (payment processing/identity verification), **Typesense** (self hosted search engine), **RabbitMQ** (self hosted message broker), **SendGrid** (email), **Sentry** (monitoring), **PostHog** (analytics), and **Uploadthing** (S3 wrapper).

Software Developer, *CNTautomation Inc.* ⧉   09/2021 – 12/2021 | Ayr, Canada
- Developed internal company tools, to increase the quality of product ad's, and made it simpler for the owner to track orders and ship products.
- Developed with **Flask**, **ES6**, and used **Nginx** as a reverse proxy. Utilized AWS ecosystem to deploy docker containers on an **AWS Lightsail** instance, manage domains on **Route 53** and images on **S3** with **Cloudfront**.

QA Engineer, *NetExperience* ⧉   01/2021 – 08/2021 | Ottawa, Canada
- Created regression tests for the first WLAN software service compatible with Open WiFi.
- Developed tests to apply custom configurations to access points and connect numerous emulated WiFi clients that executed TCP/UDP traffic.
- Designed end-to-end **Pytest/Selenium** tests to verify the application of access point configurations through the front-end web application.
- Utilized **Docker** and **Jenkins** to deploy automation scripts to multiple nodes for test execution.

Relevant Projects

Apollo Rehabilitation Glove   09/2022 – 12/2022

Demo ☐ */ Github* ☐
- Developed rehabilitation glove for stroke patients with a real-time hand position interface.
- Used **Arduino** and **RPi** to collect sensor data, compute hand position, and transmit over **WebSockets** to the users client application via **nodejs** runtime. Stored persistent data using **MongoDB.**

EventQR   11/2022 – 02/2023

Github ☐
- A QR code scanning application for uOttaHack which tracked food consumption, and raffle tickets for **500 hackers**.
- Created CLI tool with **python** for initializing QR codes, and a **React Native** application which connected to **Firestore**.

Arber

White Paper ☐ */ Github* ☐
- A DAO for facilitating trustless ERC20 donations on the Ethereum Blockchain.
- Integrates **Kleros** ☐ (decentralized dispute resolution) which holds fundraisers accountable to complete their mission statement at the expense that they lose their donations.
- Smart Contracts developed with **Solidity,** and frontend created with **NextJS.** Uses **TheGraph** for complex queries, and **IPFS** as a decentralized S3 alternative storage layer.