

Peter Hua

✉ peter.s.hua@gmail.com 📍 Vancouver, Canada 🌐 peterhua.net in petershua

Experience

Software Developer, Creator,

2023 – present | Remote

Tinker — <https://tinker-base.github.io> 📄

Created an open-source, self-hosted, backend-as-a-service (BaaS) that automates deployment on AWS, and abstracts away backend configuration toil.

- Published a CLI that automates deployment and teardown of 26 AWS components for backends with CloudFormation, reducing deployment configuration steps from ~180 to 9.
- Led the design and implementation of AWS network infrastructure for backends to be internet accessible, and least privilege access for security purposes
- Engineered automatic provisioning of NGINX, PostgreSQL, and an API layer for backends on EC2s using Docker, eliminating the need for users to write boilerplate CRUD routes
- Centralized TLS certificate exchange between clients and backend servers through TLS offloading (Route53, ALB), reducing certificate count from linear growth to constant
- Secured PostgreSQL databases through authentication with JWTs and authorization with roles
- Developed a dashboard for manipulating PostgreSQL databases as a substitute to manually writing SQL queries (React, Tailwind)
- Created RPCs enabling the dashboard to make SQL queries (DDL and DML)
- Authored technical case study — <https://tinker-base.github.io/case-study> 📄

Software/Hardware Engineer, Birket Engineering

2017 – 2021 | US, Japan, China

Designed, programmed, installed, and commissioned distributed systems for clients in theme park attractions enjoyed by millions of annual guests.

- Integrated audio/video, lighting, show action, animated figures, and special effects, with live performers using Ethernet/IP, UDP, and custom protocols
- Transformed logging/alarm data from 20 disparate sources and stored in Microsoft SQL Server
- Designed wireframes and developed user interfaces for system and machine control
- Defended designs to Engineering Safety and government auditors for public opening approval
- Trained 100+ technical staff on system operation, troubleshooting, and maintenance

Electrical Engineer (Licensed P.Eng), E2 Consulting

2012 – 2017 | Canada

- Designed, programmed, and managed control system projects for clients (up to \$1M)

Engineer/Developer (Co-op Student), Ericsson, Nokia

2009 – 2011 | Canada

- Developed network traffic test scripts for edge routers

Skills

Langauges & Frameworks

JavaScript, Node.js/Express, Ruby, Go, Sinatra, React, Redux, SQL

Tools

PostgreSQL, MongoDB, Docker, NGINX, Wireshark, Linux, Git

Cloud

AWS (CloudFormation, EC2, ALB, S3, VPC, IAM), DigitalOcean (Droplets), Heroku

Education

BASc Electrical Engineering with Distinction,

2007 – 2012

University of British Columbia

Electrical/Computer engineering coursework

Professional Engineer License, APEGA

2017