

NATHAN TANG

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EDUCATION

University of Alberta

September 2019 – April 2024 (Expected)

- Bachelor of Science (BSc) in Computing Science Specialization in Software Practice
- Data structures, algorithms, computer architecture, databases, operating systems, software design and analysis, networking and security

TECHNICAL SKILLS

Languages Python, C, Typescript/Javascript, Java (Android), HTML/CSS, SQL, Bash
Databases MySQL, PostgreSQL, MariaDB, SQLite, MongoDB, Redis, Cloud Firestore
Technologies React, Express, Electron, Node.js, Git, Docker, Windows, Linux, RISC-V

PROJECTS

Rideshare App | Typescript, React, Express, PostgreSQL, Redis

[github.com/rideshareapp](https://github.com/nathanlytang/rideshareapp)

- Developed a full-stack rideshare application centred around regularly scheduled events. Implemented a REST API backend with authentication using the **OAuth 2.0** protocol (Bcrypt and JWT).
- A fully-featured database implements users, drivers, and administrators, and scheduled trips and events.
- Frontend built on **React** using hooks and functional components. Uses Google Maps API to display user location and driver status.

Steve | Javascript, Node.js, Docker, MySQL

github.com/nathanlytang/steve

- A Discord verified bot that grabs Minecraft server information over the UDP query protocol to return server status and player info. Runs on the **Node.js** environment in **Docker**.
- Deployed to over one hundred thirty Discord VoIP servers with **hundreds of active** users every day.

MC Status | Typescript, React, Express

mcstatus.ev8e2.xyz

- A web application to complement the Steve Discord bot. Utilizes the same protocol to query Minecraft servers while being more accessible by deploying to the web.
- Provides a **REST API** for developers to build applications that utilize MC Status.

wg-cli | C, Bash

github.com/nathanlytang/wg-cli

- A CLI tool to manage Wireguard VPN servers built for **Linux**, using C and C standard libraries.
- Automates key generation, and peer creation and deletion. **Increases productivity upwards of 10x**.

Habitude | Java, Android, Firebase

github.com/nathanlytang/habitude

- Designed and built a **real-time** native Android social media application to track, encourage, and share habits, making use of location and photos.

Homelab | Proxmox, Docker

- Used **DevOps** practices to learn and deploy **scalable applications** and shorten the development lifecycle to improve code quality and delivery.
- Implement a modern network using TCP/IP, VPNs, VLANs, and firewalls using physical network infrastructure.

OTHER EXPERIENCE

Edmonton Christian Community Church Audio-Visual Team

February 2019 – Present

DiscoverE Engineering and Science Camps Instructor/Volunteer

July 2019 – August 2019