

NATHAN TANG

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EDUCATION

University of Alberta

September 2019 – April 2024

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

EXPERIENCE

Dotdash Meredith *Software Engineer*

April 2023 – Present

- Played a central role in architecting a new programmatic advertising delivery service
- Engineered efficient algorithms to evaluate user data for optimized ad configuration delivery and dynamically bundle frontend code, **surpassing initial speed and performance expectations**
- Collaborated closely with the authentication services team to define specifications and requirements, and implement our service's authentication service with single sign-on and OAuth 2.0
- Integrated our service with various brands across our network and perform A/B testing

Dotdash Meredith *Software Engineering Intern*

May 2022 – April 2023

- Developed and maintained **real-time bidding** and user insight platforms among programmatic advertising vendors to ensure high-quality delivery both server-side and client-side across desktop and mobile platforms
- Optimized client-side requests to **Google Ad Manager**, directly increasing ad visibility and performance
- Rewrote tagging library test suite with updated test methodologies, and addressed broken or outdated tests to reflect the evolving functionalities of **Prebid**, ensuring comprehensive test coverage and improving code quality
- Built data-driven solutions to analyze and optimize ad performance using **Google Lighthouse**, **Google Analytics**, and reporting dashboards through **Kibana** and Looker Studio

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, 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 600 Discord servers** with hundreds of active users daily.

Homelab | Linux, 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.

TECHNICAL SKILLS

Languages Python, C, Typescript/Javascript, Golang, Java, HTML/CSS, SQL, Bash

Databases MySQL, PostgreSQL, MongoDB, Redis, Cloud Firestore

Technologies React, Express, Django, Node.js, Git, Docker, Android, Windows, Linux, AWS, Azure