

# NATHAN TANG

nathan.ly.tang@gmail.com | 780-908-8238 | nathanlytang.com | github.com/nathanlytang

## 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- Rewrote tagging library test suite with updated test methodologies, and addressed broken or outdated tests to reflect the evolving functionalities of **Prebid**, ensuring comprehensive test coverage and improving code quality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](https://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

**Habitude** | Java, Android, Firebase

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

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

**MC Status** | Typescript, React, Express

[mcstatus.ev8e2.xyz](https://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.

**Address Book** | Python, Tkinter

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

- An address book desktop app built with Python using Tkinter and Google APIs. Uses the Google Sheets API to keep data constantly updated across devices using authentication keys

**wg-cli** | C, Bash

[github.com/nathanlytang/wg-cli](https://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.**

## OTHER EXPERIENCE

---

**Edmonton Christian Community Church** *Audio-Visual Team*

*February 2019 – Present*

**DiscoverE Engineering and Science Camps** *Instructor/Volunteer*

*July 2019 – August 2019*

**Royal Canadian Air Cadets** *Warrant Officer Second Class, Training NCO*

*September 2013 – June 2019*

- Steve:
  - Utilizes asynchronous techniques to handle concurrent requests, ensuring optimal performance during peak usage

### **About Your Role:**

*Dotdash is looking for a Full-stack web developer, with an interest in working on integrations and service level functionality for our ad tech, to work on our Revenue Development team.*

*Working across the entire Dotdash portfolio of brands and sites, you will be helping to build out implementations of advertising, data management, and consent management platforms. You will have a direct and immediate impact on the revenue technology space at Dotdash.*

### **About your contributions:**

- *Work in a full-stack web development environment consisting of HTML, Javascript, CSS, and some Java.*
- *Help develop ad-tech integrations with our server-rendered sites, including using libraries like prebid.js to improve existing header-bidding functionality, or leveraging IAB standards guidance to enable new revenue partnerships.*
- *Build and maintain APIs and integrate with third party vendors.*
- *Investigate and integrate with new revenue technologies.*

## About You:

- Experience with Javascript, preferably vanilla Javascript, HTML, and CSS. Java experience is also an asset.
- Enjoy working and integrating with multiple third party providers.
- Ability to learn new technologies, and an interest in system performance and scalability.

## Internship Details:

- **Start date:** May 1, 2022
- **Internship duration:** 16 months

## About Us:

Dotdash Meredith is the largest digital and print publisher in America. From mobile to magazines, nearly 200 million people trust us to help them make decisions, take action, and find inspiration. Dotdash Meredith's over 40 iconic brands include PEOPLE, Better Homes & Gardens, Verywell, Food & Wine, The Spruce, Allrecipes, Byrdie, REAL SIMPLE, Investopedia, and Southern Living.

Dotdash Meredith embraces inclusivity and values our diverse community. We are committed to building a team based on qualifications, merit, and business needs. We are proud to be an equal opportunity employer and do not discriminate on the basis of race, religion, color, national origin, gender, sexual orientation, age, marital status, veteran status, or disability status.

Please be aware of fraudulent recruiters offering opportunities at Dotdash Meredith. Note that any correspondence with a member of the Dotdash Meredith recruiting team will come from a @dotdash.com or a notification@jobvite.com account belonging to a Dotdash Meredith Recruiter. If you are in conversations about a job opportunity and wish to confirm its validity, please reach out directly to security@dotdash.com.

<https://grv.media/static/uploads/1/2021/11/Ad-Tech-Software-Engineer-6.pdf>

<https://zety.com/blog/software-engineer-resume>

<https://jobs.apple.com/en-us/details/200349950/software-architect-ad-platforms>

<https://ca.topresume.com/career-advice/software-developer-job-description>

<https://www.showbizjobs.com/jobs/nexstar-ad-tech-engineering-lead-in-los-angeles/jid-gxk7z4>