

Tom Zhu

+1 613-762-3313 | tomzhu@cmail.carleton.ca | linkedin.com/in/zhu-tom | github.com/zhu-tom | zhutom.com

EDUCATION

Carleton University | *Bachelor of Computer Science (Honours)*

Sep 2019 – May 2024

- Third-year standing, **4.0/4.0 GPA (A+)**
- Awards: Entrance Scholarship (\$16,000), Computer Science Award (\$1,000), Dean's Honour List
- Relevant Coursework: Design & Analysis of Algorithms, Web Applications, Artificial Intelligence, Operating Systems, Object-Oriented Software Engineering, Programming Paradigms, Database Management Systems

EXPERIENCE

Coinbase | *Software Engineer Intern*

May 2022 – Sep 2022

- Deployed Docker containerized real-time query engine on AWS to improve observability of Prime Broker algorithm engine by providing platform to generate complex queries, analytics, and dashboards with sub-second latencies
- Prepared Golang command-line tool with Kafka producer to forward and log over 40K events per second to Redpanda stream
- Created Python package to consume denormalized Kafka event stream into a set of curated dynamic tables and visuals
- Enabled single sign-on by creating proxy service in Golang to limit access to sensitive client data

Shopify | *Software Developer Intern*

Sep 2021 – Dec 2021

- Took ownership of project to implement merchant cancellation of spending cards by creating React components and GraphQL mutations in Ruby on Rails, reducing related support requests by 100% and increasing autonomy
- Devised yearly summary page using React with TypeScript and GraphQL, giving merchants insight into annual trends and data
- Established utility functions in TypeScript to allow for the testing of React hooks mounted within the Banking context
- Built internal admin transactions list using Rails MVC to quickly view associated transaction details for 1000+ merchants

JSI Telecom | *Software Developer Co-op*

May 2021 – Aug 2021

- Combined test and analysis tools into cohesive Angular platform enabling long-running tests, experiments, and reporting
- Formed REST API services in Spring Boot to interact with JPA repositories and manage jobs in MySQL database
- Instituted multi-threaded Java job runner with Quartz cron scheduling to automatically trigger recurring jobs
- Configured STOMP messaging over WebSocket protocol to relay live log output of processes to SockJS client
- **Awarded Co-op Star Performer** for exceeding expectations and contributing at the level of a Junior Developer

Carleton University | *Undergraduate Teaching Assistant*

Sep 2020 – Apr 2022

- Facilitated weekly tutorials and office hours with over 60 students to reinforce of course material and assist comprehension
- Evaluated student work and addressed inquiries efficiently to ensure thorough, constructive, and timely feedback
- Courses: Intro to CS (Python), Discrete Structures, Web Applications (JavaScript, Node.js, Express, MongoDB)

Harled Inc. | *Software Engineer Intern*

Aug 2020 – Nov 2020

- Constructed interactive flight mapping system in React and Leaflet to visualize aircraft and asset location over time
- Implemented ETL tool to convert raw flight data into a list of flight path coordinates for storage in MongoDB

PROJECTS

Blamechain | *JavaScript, React, Node.js, Google Cloud, NLP, Speech-to-Text*

devpost.com/software/blame-game

- Designed React app that saves arguments onto the blockchain to analyze and confidently assign blame to specific parties
- Set up Cloud Functions in Node.js to process audio files using Speech-to-Text and Natural Language API
- **Winner at Hack the North, Canada's biggest hackathon** (1,600+ participants)

Carma | *JavaScript, React, AutoML, TensorFlow.js, Firebase, Google Cloud*

devpost.com/software/carma-lown32

- Engineered reaction time game, sobriety test layout, and score tracker in React to reduce traffic deaths and insurance risk
- Integrated user data and identity management using Firebase authentication and Firestore to track scores and test results
- **Best Use of Google Cloud, Intact Insurance Innovation Challenge Winner** at Hack the 6ix

VOLUNTEERING

VP of Engineering | *CU Blueprint*

Sep 2020 – Present

- Produced CRM platform in React, MongoDB, Express, and Node.js for non-profit distributing interest-free loans by allowing clients and admins to track applications, payments, and contracts, helping save over \$263,000 of interest
- Coordinated test-driven Agile team while facilitating sprint planning, backlog grooming, stand-ups, and demos
- Communicated directly with non-profit organizations to scope projects and conducted interviews to recruit members

SKILLS

Languages: Java, Python, JavaScript, TypeScript, Ruby, C, Swift, SQL, GraphQL, PHP, Scheme, Prolog, Golang
Frameworks/Libraries: React, Rails, Angular, MongoDB, Node.js, Express, Firebase, Flask, WebSockets, Spring
Developer Tools: Git, DigitalOcean, Jira, Agile, Docker, Google Cloud, Netlify, Heroku, MongoDB Atlas