

Tom Zhu

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EDUCATION

Carleton University | *Bachelor of Computer Science*

Sep 2019 - May 2024

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

WORK EXPERIENCE

Software Engineer Intern | *Coinbase*

May 2022 - Present

- Working on Prime Trading Engineering with Golang, Ruby, Docker, Rails, PostgreSQL, MongoDB, and DynamoDB

Software Developer Intern | *Shopify*

Sep 2021 - Dec 2021

- Championed project to implement cancellation of physical cards before activation by leveraging Stripe API to create GraphQL mutations in Ruby on Rails, decreasing related support requests by 100%, increasing autonomy
- Devised yearly summary using React TypeScript and GraphQL queries giving merchants insight into annual trends
- Established utility in TypeScript to allow for the testing of React hooks requiring mount within the Banking context
- Built internal transactions list using Rails MVC to include associated transaction and card details if applicable

Software Developer Co-op | *JSI Telecom*

May 2021 - Aug 2021

- Combined test, analysis tools into cohesive Angular platform enabling long-running tests, experiments, 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
- Nominated as **Co-op Star Performer** for exceeding expectations, contributing at the level of a Junior Developer

Undergraduate Teaching Assistant | *Carleton University*

Sep 2020 - Apr 2022

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

VOLUNTEER EXPERIENCE

VP of Engineering | *CU Blueprint*

Sep 2020 - Present

- Produced platform in React, MongoDB, Express, and Node.js to manage applications and clients for NPO distributing interest-free loans, helping track payments, contracts and providing both client and admin interfaces
- Coordinated test-driven Agile team while facilitating sprint planning, backlog grooming, stand-ups, demos

Peer Mentor | *Carleton Science Student Success*

May 2020 - Apr 2021

- Motivated and supported 15+ students to define and achieve goals by holding mentoring sessions, workshops

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 parties
- Setup Cloud Functions in Node.js to process audio files using Speech-to-Text and Natural Language API
- **Finalist at Hack the North 2021**, Canada's biggest hackathon (1650+ participants)

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

devpost.com/software/carma-lown32

- Engineered reaction time game, sobriety test layout, score tracker in React to reduce traffic deaths, insurance risk
- Integrated user data, identity management using Firebase authentication and Firestore to track score, test results
- **Best Use of Google Cloud, Intact Insurance Innovation Challenge Winner** at Hack the Six 2021

Automated Gym Booking | *JavaScript, Python, React, Next.js, MongoDB*

github.com/zhu-tom/autoreg

- Registered cron job executing Python script to authorize and book slot directly through Goodlife API
- Created Next.js web app complete with session authorization to allow users to select locations and slots

Timetable Generator | *Python, Flask, JavaScript, jQuery*

carleton-timetable-generator.herokuapp.com

- Prepared API in Flask to scrape lectures and tutorials to enumerate all possible non-conflicting combinations
- Deployed UI to display and save timetables and show instructor ratings given a list of course codes and filters

SKILLS

Languages: Java, Python, JavaScript, TypeScript, Ruby, C, Swift, SQL, GraphQL, PHP, Scheme, Prolog

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