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

Coinbase | *Software Engineer Intern*   May 2022 – Present
- Working on Prime Trading Algorithms with Golang, Docker, Rails, PostgreSQL, MongoDB, and DynamoDB

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 using React with TypeScript and GraphQL, giving merchants insight into annual trends
- Established utility in TypeScript to allow for the testing of React hooks mounted within the Banking context
- Built internal 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, 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
- 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 assist with course material comprehension
- 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)

Harled Inc. | *Software Engineer Intern*   Aug 2020 – Nov 2020
- Implemented script to convert raw flight data to list of flight path coordinate pairs and storage in MongoDB
- Constructed interactive flight mapping system in React and Leaflet to visualize aircraft and asset location over time

VOLUNTEER EXPERIENCE

CU Blueprint | *VP of Engineering*   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, saving over $263,000 of interest
- Coordinated test-driven Agile team while facilitating sprint planning, backlog grooming, stand-ups, and demos

Carleton Science Student Success Centre | *Peer Mentor*   May 2020 – Apr 2021
- Motivated and supported 15+ students to define and achieve goals by holding mentoring sessions and 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
- **Winner at Hack the North, Canada's biggest hackathon** (1600+ 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 scores, test results
- **Best Use of Google Cloud, Intact Insurance Innovation Challenge Winner** at Hack the 6ix

Automated Gym Booking | *JavaScript, Python, React, Next.js, MongoDB*   github.com/zhu-tom/autores
- 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*   github.com/zhu-tom/Course-Registration
- 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, 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