Tom Zhu

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EDUCATION

Carleton University | *Bachelor of Computer Science Honours* Sep 2019 – May 2024
- Third-year standing, **11.95/12.0 GPA (A+)**
- Awards: Entrance Scholarship ($16,000), Computer Science Award ($1,000), Deans' Honour List
- Relevant Coursework: Discrete Math, Mobile Development, Abstract Data Types and Algorithms, Web Applications, Systems Programming, Software Engineering, Programming Paradigms, Database Management Systems

EXPERIENCE

Software Developer Co-op | *JSI Telecom* May 2021 - Aug 2021
- Working with Angular, Spring Boot, Solr, Cassandra, DataStax, Lucene

Undergraduate Teaching Assistant | *Carleton University* Sep 2020 – Apr 2021
- Facilitated weekly tutorials and office hours with over 60 students to assist in the grasp of course material
- Evaluated student work and addressed inquiries to ensure thorough and constructive feedback
- Courses: Introduction to Computer Science, Discrete Structures

Software Engineering Intern | *Harled Inc.* Aug 2020 – Nov 2020
- Developed a Flight Mapping System to help aircraft managers visualize asset location and plan accordingly
- Implemented conversion of raw flight data to list of flight path coordinate pairs and storage in MongoDB
- Constructed interactive dashboard map in React and Leaflet to visualize asset location through time

EXTRACURRICULAR

Project Lead and Developer | *CU Blueprint* Sep 2020 – Present
- Produced CRM platform that improves client and application tracking for NPO providing interest-free loans
- Leveraged Express, MongoDB, and Docker to implement a REST API with JWT authorization
- Coordinated test-driven Agile team while facilitating sprint planning, backlog grooming, stand-ups, demos
- Assembled dashboards and views for loan officers to track clients through the loan process using React TypeScript

Peer Mentor | *Science Student Success Centre* May 2020 – Apr 2021
- Motivated and supported students to define and achieve their goals by holding weekly 1-on-1 mentoring sessions
- Hosted workshops and events to help peers attain personal, professional, academic goals in Computer Science

PROJECTS

Automated Gym Booking | *JavaScript, Python, React, Next.js, MongoDB* github.com/zhu-tom/autores
- Developed API to register 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

Stock Market | *TypeScript, JavaScript, React, Express, Node.js, MongoDB* bank-street-bets.herokuapp.com
- Built a stock market simulator where users define watchlists, event subscriptions, buy/sell orders
- Programmed a RESTful Express API with session authorization that accesses schema-based MongoDB database

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 timetables and instructor ratings given a list of course codes and filters

PoseFit | *JavaScript, React Native, Expo, PoseNet, Firebase, Google Cloud* github.com/zhu-tom/PoseFit
- Designed mobile app utilizing the TensorFlow PoseNet model to analyze exercise form and count repetitions
- Implemented pose analysis algorithm to determine proper form and give feedback in real time

SKILLS

Languages: Java, Python, JavaScript, TypeScript, C, Swift, SQL, GraphQL, PHP, Scheme, Prolog
Frameworks & Libraries: React, React Native, Expo, MongoDB, Gatsby, Node.js, Express, Android SDK, iOS SDK, WebRTC, Firebase, Flask, jQuery, PostgreSQL, MySQL, SQLite, Docker, Socket.io
Developer Tools: Git, DigitalOcean, Jira, Agile, Docker, Google Cloud, Netlify, Heroku, MongoDB Atlas