

Tom Zhu

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EDUCATION

Carleton University · *Bachelor of Computer Science Honours*

Sep 2019 – May 2024

- Second-year standing, **12.0/12.0 CGPA (A+)**
- Awards: Entrance Scholarship (\$4,000/year), Computer Science Award (\$1,000), Deans' Honour List
- Relevant Coursework: Discrete Structures I & II, Intro to Mobile Application Development, Intro to Computer Science I & II, Abstract Data Types and Algorithms, Fundamentals of Web Applications, Intro to Systems Programming

EXPERIENCE

Project Lead · *CU Blueprint*

Sep 2020 – Present

- Produced CRM platform that improves client and application tracking for NPO providing interest-free loans
- Leveraged Flask, SQLAlchemy, and Docker to implement an API to manage client data, notifications in PostgreSQL
- Coordinated test-driven Agile developer team while facilitating sprint planning, backlog grooming, standups, demos
- Constructed dashboards and views to for loan officers to track clients through loan process using React and Formik

Undergraduate Teaching Assistant · *Carleton University*

Sep 2020 – Present

- Facilitated weekly tutorials and office hours with over 60 students to assist in the comprehension of course material
- Evaluated student work and addressed inquiries in an efficient manner to ensure relevant and constructive feedback
- Courses: Introduction to Computer Science I, Discrete Structures I

Software Engineering Fellow · *Harled Inc.*

Aug 2020 – Nov 2020

- Led team of fellows as Project Lead to develop Flight Mapping System to locate all aircrafts at any point in time
- Implemented script to convert raw flight data to list of coordinate pairs representing flight path to store in MongoDB
- Constructed interactive dashboard/map in React and Leaflet to display visualization of aircrafts traveling over time
- Communicated between the client and development team to ensure consistency with requirements, update on progress

Peer Mentor · *Science Student Success Centre*

Jun 2020 – Present

- Motivated and supported students to define and achieve their goals by holding weekly 1-on-1 mentoring sessions
- Hosted workshops and events to assist peers in attaining personal, professional, academic success in Computer Science

PROJECTS

Stock Market · *JavaScript, TypeScript, React, Express, Node.js, MongoDB*

bank-street-bets.herokuapp.com

- Built a multiplayer stock market simulator where users define watchlists, event subscriptions, buy/sell orders
- Created interactive stock price data visualization using Chart.js and D3.js with a responsive user interface
- Programmed a RESTful Express API with session authorization that accesses schema-based MongoDB database

Speed Friending · *Android, Java, WebRTC, Firebase*

github.com/zhu-tom/Viber

- Engineered anonymous speed-friending mobile app with video and text chat capability in Android
- Synced video and audio streams using WebRTC P2P by exchanging SDPs and ICE candidates in Firebase
- Designed friend request system to hide private user data until mutual acceptance after chat/call is terminated

Fast Food Haven · *Python, Flask, JavaScript, jQuery, UIPath*

fast-food-haven.herokuapp.com

- Developed web app in 24 hours to serve as an all-encompassing hub for fast food coupons and deals
- Accessed Geolocation and Maps API to attach distance and map links to nearest corresponding franchisee
- Configured Flask API to scrape data from coupon websites asynchronously into dictionaries converted to JSON
- Winner of Best Hack Using UIPath at cuHacking 2020

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

carleton-timetable-generator.herokuapp.com

- Designed web app to expedite the tedious course registration and timetable creation process through automation
- Deployed UI to display all possible timetables and instructor ratings given list of course codes and filters
- Prepared REST API in Flask to scrape lectures and tutorials to enumerate all possible combinations

SKILLS SUMMARY

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

Frameworks & Libraries: Flask, jQuery, React, MongoDB, Gatsby, Node.js, Express, Android SDK, iOS SDK, WebRTC, Firebase, OAuth, PostgreSQL, MySQL, Docker, Socket.io

Developer Tools: Git, Gitlab, Jira, Agile, Docker, Google Cloud Platform, Netlify, Heroku, MongoDB Atlas