Tom Liu **US Citizen**

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Education

Brown University | B.S. Applied Mathematics-Computer Science, 4.0/4.0 GPA   **Sep, 2018-May, 2022 (Expected)**

Coursework - Data Structures and Algorithms, Data Science, Software Engineering, Computer Systems, Objected-Oriented Programming, Statistical Inference, Linear Algebra, Partial Differential Equations, Ordinary Differential Equations, Honors Calculus, Electricity & Magnetism, Dynamics and Vibrations, Honors Intro to Engineering, Crossing the Consumer Chasm by Design, Investments, Intermediate Microeconomics (Mathematical), Principles of Economics, Human Cognition

Experience

Cabana Health | Co-founder, Product Constructor   **Mar, 2020-Present**
- Technical co-founder of a mobile health startup that allows users to create connected, goal-centered teams that match their health lifestyles.
- Iterating and developing a product with Swift and Firebase in preparation for a beta with 50+ users on the waitlist.
- Participated in Babson University's Summer Catalyst startup accelerator (Jun, 2020-Aug, 2020).

Qualcomm | Software Engineering Intern   **Jun, 2020-Aug, 2020**
- Software engineering intern for Qualcomm's 5G Automation Development team.
- Developed Python post-processing scenarios for an in-house software build testing framework.
- Improved AngularJS user interface and REST APIs for an end-to-end automation web tool to streamline testing process.

Brown University Computer Science Department | Teaching Assistant   **May, 2019-Dec, 2019**
- Teaching assistant for Professor Andy van Dam's intro computer science course taught in Java.
- Worked on a team of 50 undergraduate teaching assistants to instruct a class of nearly 400 students.
- Lead group design sections and labs, held one-on-one office hours for conceptual and debugging assistance, graded student projects, and edited the course's filmed online content.

Flex | Manufacturing Engineering Intern   **May, 2019-Jul, 2019**
- Manufacturing engineering intern for Flex's Advanced Manufacturing Engineering team.
- Used SQL and Power BI to create a closed feedback loop between pick-and-place machines and automated optical inspectors in the surface-mount technology production line.
- Increased production efficiency of printed circuit boards for telecommunication devices.

Projects

reSearch   **Feb, 2020-May, 2020**
- Academic database that makes it easier for researchers to find relevant literature and key contributors in different fields.
- Combines software engineering with data science, incorporating algorithms like word2Vec, locality sensitive hashing, k-means, and more.
- Implemented using JavaScript, Java, and Python with a team of four.
- Iterated using feedback from interviews with target audience of professional and student researchers.

Predicting Accidents in New York City   **Feb, 2020-May, 2020**
- Predictive model for car accidents in New York City that uses weather conditions, average traffic speeds, time, and location to predict quantity of accidents in a given hour.
- Model outperforms baseline model by reducing mean squared error by over 50%.
- Implemented using Python and SQL with a team of four.
- Created project abstract and poster to present findings with the goal of helping city-planners better understand traffic trends in New York City.

Skills

Programming - Java, Python, Swift (SwiftUI), MATLAB, JavaScript, SQL, HTML, CSS, and C.
Tools - Git, TensorFlow, MongoDB, Firebase, ExpressJS, Flask, React, Angular, AngularJS, NodeJS, and more.
Language - Proficient in English and Chinese. Intermediate in Spanish.

More

Extracurriculars - Dynamics and Vibrations Course Grader
Competitions - Hack@Brown (Jan, 2019), MakeHarvard (Feb, 2019)
Non-University Coursework - Machine Learning by Stanford University, Machine Learning Crash Course by Google, The Web Developer Bootcamp by Colt Steele
Fun Facts - Hiked in Mt. Whitney, Grand Canyon, and Yosemite. Completed Orange County Marathon.