

# THOMAS TAY

(734) 882-9855 • [ttay@umich.edu](mailto:ttay@umich.edu)  
[ttay.me](http://ttay.me) • [github.com/thomastay/](https://github.com/thomastay/)

## EDUCATION

### UNIVERSITY OF MICHIGAN

B.S. Computer Science, B.S. Honors Mathematics

Ann Arbor, MI

Expected: May 2020

- **GPA:** 3.9/4.0 - Awarded EECS Scholar (2019) for academic excellence in Computer Science.
- **Course Highlights:** Distributed Systems, Operating Systems, Computer Security, GPU Programming, Data Structures & Algorithms, Probability & Statistics, Honors Linear Algebra

## WORK EXPERIENCE

### MICROSOFT

Software Engineering Intern – MS Teams

Seattle, WA

May 2019 – Present

- Frontend engineer of a Slack-like single page web app using frameworks like Angular, React and Node.
- Accelerated message retrieval for users by selectively refreshing caches based on their geographical region.
- Enhanced focus for site reliability engineers by building a new feature to lock replies to an incident thread, improving user experience for retail customers by locking threads after a promotion has ended.

### UNIVERSITY OF MICHIGAN – EECS 203 DISCRETE MATH

Instructional Assistant

Ann Arbor, MI

Aug 2018 – May 2019

- Exam management team lead, in charge of organizing and typesetting exams for over 800 students.
- Taught a discussion section for a class of 30 students for my University's Discrete Math course.
- Worked with professors to identify weaknesses in students' proof writing skills.

### UNIVERSITY OF MICHIGAN, COMPUTER AIDED ENGINEERING NETWORK

Web Team Student Developer

Ann Arbor, MI

May 2018 – Jun 2018

- Maintained the frontend of the University's ParkIT web app using Python (Flask) and JavaScript.
- Streamlined onboarding of new hires by authoring a Python3 tutorial focusing on modern OOP concepts.

### SINGAPORE ARMED FORCES (SERGEANT)

3rd Sergeant - Transportation Command HQ

Singapore

Feb 2015 – Feb 2017

- Led a unit of 50+ soldiers on transportation missions, including replenishments of mission critical supplies, ensuring mission readiness through training of personnel for the job.
- Maintained morale and discipline by upholding leadership standards and punishing defaulters.

## COMPUTER SCIENCE SIDE PROJECTS / HACKS

### FACEBOOK FOR MICROSOFT TEAMS

(2019)

- Built an aggregated newsfeed that pulls together all a user's recent likes, at-mentions and comments.
- Sped up user reply time 200% by eliminating the need to switch channels between replies.
- Facilitated quick dives into a channel by dynamically updating the webpage in Angular.
- Optimized speed by synchronizing reply chain objects across the server, local storage, and memory cache.

### INSTAGRAM POST AUTO-SCHEDULER

(2018)

- Programmed a Python bot that schedules your Instagram posts, and automates liking and following.
- Created a full-stack web app using Python Flask and Bootstrap to allow users to schedule posts.
- Made user's schedules persistent by using SQLite as a lightweight backend database.

### POLYBAR – OPEN SOURCE CONTRIBUTOR

(2018)

- Patched a multithreaded race condition where modules were modifying the same environment variable, by creating a mutex in the global module controller to ensure synchronization across threads.

### Languages

Spoken & Written English and Chinese, Basic French

### CS Skills

**Expert:** C++, Python, Typescript

**Worked with:** JavaScript, C#, Bash, Rust, F#

### Frameworks

AngularJS, React, Node, Electron, Git, ASP.NET, CMake, Flask, NumPy

### For Fun

Ballroom Dancing, Soldering, Arduino, Raspberry Pi