**THOMAS TAY**

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### education

## University of Michigan Ann Arbor, MI

B.S. Computer Science, B.S. Honors Mathematics *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 Seattle, WA

*Software Engineering Intern – MS Teams 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 Ann Arbor, MI

*Instructional Assistant 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 Ann Arbor, MI

*Web Team Student Developer 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) Singapore

*3rd Sergeant - Transportation Command HQ* *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