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 William Branstrom prize (2017) for academic excellence
- **Course Highlights**: Distributed Systems, Operating Systems, Computer Security, GPU Programming, Data Structures & Algorithms, Probability & Statistics, Honors Linear Algebra

WORK EXPERIENCE

MICROSOFT   **Redmond, WA**
Software Engineering Intern – MS Teams   *May 2019 – Present*
- Backend engineer of a Slack-like single page web app using frameworks like Angular, React and Node.
- Accelerated message retrieval for users by selectively updating caches based on their geographical region.

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 new hiring processes by authoring a Python3 tutorial that teaches OOP concepts.
- Optimized University classroom scheduling through automated Python scripts.

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

INSTAGRAM POST AUTO-SCHEDULER [PYTHON]   **(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.
- Used SQLite in the application backend database to keep track of user data.

POLYBAR – OPEN SOURCE CONTRIBUTOR [C++]   **(2018)**
- Augmented a module in Polybar, a 100% customizable status bar for the Linux OS with over 50k downloads.
- Patched a multithreaded race condition where modules were modifying the same environment variable.
- Doubled my speed in comprehending large codebases (over 50k LOC) by using vim and ctags.

LASER ENGRAVER DIY HARDWARE PROJECT   **(2017)**
- Built a DIY Laser Engraver made from scrap DVD Drives capable of engraving wood.
- Engineered a custom variant of the GRBL control software to run our hardware on the Arduino Platform.
- Presented a functioning prototype at the Singapore Maker Fair, a National fair for hardware innovators.

Languages   Spoken & Written English and Chinese, Basic French
CS Skills   **Expert:** C++, Python, Typescript   **Worked with:** ES6+ JS, Node, Bash, Rust, Java
Frameworks AngularJS, React, Node, Grunt, Electron, Git, CMake, Flask, NumPy, Pandas
For Fun   Ballroom Dancing, Soldering, Arduino, Raspberry Pi