

THOMAS TAY

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EDUCATION

UNIVERSITY OF MICHIGAN

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

Ann Arbor, MI
Expected: May 2020

- **GPA:** 4.0/4.0 - Awarded William Branstrom prize (2017) for academic excellence
- **Course Highlights:** Data Structures & Algorithms (281), Computer Organization, Honors Linear Algebra, Foundations of Computer Science, Combinatorics and Graph Theory

WORK EXPERIENCE

UNIVERSITY OF MICHIGAN – EECS 203 DISCRETE MATH

Instructional Assistant

Ann Arbor, MI
Aug 2018 – Present

- 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.
- Scheduled Office hours for students and created homework questions.

UNIVERSITY OF MICHIGAN, COMPUTER AIDED ENGINEERING NETWORK

Web Team Student Developer

Ann Arbor, MI
May 2018 – Jun 2018

- Maintained the front end of 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.

RAFFLES INSTITUTION HIGH SCHOOL

Teacher – Economics & Biology

Singapore
Feb 2017 – Jun 2017

- In charge of 70 high school juniors over four months, ensuring their academic excellence and well-being.
- Designed teaching materials and planned lesson structures that adhered to curriculum objectives.

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

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.
- Implemented multithreading principles including mutexes, threads, and lock-guard in C++.
- Developed skills to comprehend large codebases (over 50k LOC) 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 **Worked with:** JavaScript, Bash, SQL, Java, vimscript

Frameworks Git, CMake, Flask, NumPy, Pandas, jQuery, SQLite, Bootstrap

For Fun Ballroom Dancing, Soldering, Arduino, Raspberry Pi