

# Aron Choo

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## EDUCATION

### University of Michigan, Ann Arbor

Graduating April 2024

Dual Degree: Bachelor of Science in Computer Science and Mechanical Engineering.

GPA: 3.98/4.00

Courses: Data Structures and Algorithms, Theory of Computation, Discrete Math, Computational Linear Algebra.

Engineering Honor Societies: Tau Beta Pi (Active), Eta Kappa Nu (Electee).

### Stanford University

Jun 2021 – Aug 2021

Summer Session courses: Technology Entrepreneurship and Public Speaking.

### Anglo-Chinese School (Independent), Singapore

Jan 2013 – Dec 2018

International Baccalaureate: 44/45 Points (Higher Level Physics, Chemistry, Mathematics).

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## SKILLS

Languages: C/C++, Python, MATLAB, Arduino, Julia.

Tools: VSCode, Git, SOLIDWORKS, Siemens NX, Onshape, Adams, CarSIM.

Certifications: SOLIDWORKS Associate in Mechanical Design.

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## WORK EXPERIENCES

### DSO National Laboratories, Singapore

May 2022 – Jul 2022

Research and Development Intern, Robotics Division

- Enabled low-cost anomaly detection through machine learning and acoustic analysis using MATLAB.
- Attained 90% testing accuracy with Fast Fourier Transform and a two-class Support Vector Machine (SVM).
- Rapid-prototyped a heat sink cooler cum pitot tube tester via CAD and 3D printing.

### UofM Secure Cloud Manufacturing Research Team

Sep 2021 – Dec 2021

Controls & Automation Sub-team

- Integrated a Microsoft Kinect RGB-D camera onto a 7 DoF KUKA industrial robotic arm.
- Established master-slave connectivity between on-board ROS and external Linux to stream RGB-D data.

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## EXTRA-CURRICULAR ACTIVITIES

### Member – UofM Solar Car Team

Jan 2022 – present

- Optimized vehicle dynamics using industry-grade car simulation software to aid in car concept selection.
- Conducted static and dynamic stability analysis and CG estimation amidst packaging considerations.

### President – UofM Singapore Students' Association

May 2021 – Apr 2022

- Organized 8 events averaging 30 people each to foster cohesion among UofM Singaporean students and alumni.

### Chairperson – Anglo-Chinese School (Independent) Robotics Club

Jan 2016 – Dec 2018

- Led the club of 30 to success at international Robotics competitions:
  - VEX Robotics World Championship
    - Division Champion, Amaze Award, Innovate Award (2018); Teamwork Award (2016)
  - FIRST Global Challenge
    - World Champion (2018); Silver Medal (2017)
- Revamped club's recruitment drive and training program to better select and groom talent.
- Spearheaded a Robotics Outreach Program for underprivileged students.
- Created club YouTube channel; garnered 225,000 global views on our various robot designs.
- Dedicated 20+ hours per week to building, programming & fine-tuning competition robots.

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## AWARDS

- 2022 UofM James B. Angell Scholar (4 consecutive terms of all A's).
- 2020 UofM William J. Branstrom Freshman Prize (Awarded to top 5% of cohort).
- 2019 Singapore Public Service Commission Scholarship (Awarded to 90 out of 2,200 applicants).