

## Education

- **Singapore University of Technology and Design (SUTD)** Singapore  
*Bachelor of Engineering (Engineering Product Development)* May 2019 - Present
  - Appointed as the Formation and Coordination of Study Groups Rep for Freshmore Class.
  - Appointed as a House Guardian in SUTD Hostel.
  - Admitted to the SUTD Global Leadership Programme (Sponsored Summer Exchange Programme).
- **St. Andrew's Junior College (SAJC)** Singapore  
*Singapore-Cambridge GCE Advanced Level* 2017 - 2018
  - Graduated with **85** rank points (AAAC/AC) - Science Stream.
  - Obtained Merit for H3 course at National University of Singapore: Introduction to Modern Physics (PC1144).
  - Made an e-Portfolio Website for the Talent Development Programme:  
<https://sites.google.com/site/jamesrttdpeportfolio/>
  - Provided audio-visual support in St. Andrew's Hall for hall events.
  - Helped out in preparing ingredients for Willing Hearts' soup kitchen.
  - Completed **33** VIA hours.
  - Appointed as Mathematics Subject Rep in 2017 and Class Vice-Chairman in 2018.
- **Anglo-Chinese School (Independent) (ACS(I))** Singapore  
*Singapore-Cambridge GCE Ordinary Level* 2015 - 2016
  - Graduated with an L1R5 of **9** (4 A1s, 2 A2s and 2 B3s).
  - Graduated with **27** CCA points (A1).
  - Took Higher Malay as MTL.
  - Participated as a member of Choir and The Boys' Brigade.
  - Completed **152** VIA hours and **6** Enrichment modules.
  - Went to Taiwan for Overseas Exploration Programme and to Malaysia for Character Development Programme.
  - Produced a class video for Year Farewell.
- **Gloria Junior High School 2** Surabaya, Indonesia  
2012 - 2014
  - Was involved in various Mathematics competitions and olympiads.
  - Participated in Graphic Design as an extracurricular activity.
  - Went to Singapore before taking the Indonesian Ujian Nasional (Sekolah Menengah Pertama).
- **Alusis Petra Sejahtera** Surabaya, Indonesia  
*Indonesian Ujian Nasional (Sekolah Dasar)* 2006 - 2012
  - Graduated with an overall score of **28.30** out of 30.00 (combined from 40% USBN and 60% UN scores).
  - Was part of the last cohort graduating from the school.

## Co-Curricular Activities

- **SUTD Organisation of Autonomous Robotics** Singapore  
*Vice-President* *Jun 2019 - Present*
  - Leading the organization of about 70 people strong together with the President with the objective of nurturing a committed robotics community by building skills to take on industry projects.
  - Supervising the day-to-day operation and directing the culture, vision and mission of the club.
  - Assisting the President in delegating work amongst an Executive Committee of 7 individuals.
  - Working closely with the Secretary in settling administrative matters of the club.
  - Monitored the logistics flow and manned MOMobot, an autonomous ground vehicle, for Singapore Maker Extravaganza 2019, an external event at which SOAR showcased our club projects.
  - Assumed the position of Logistics IC for SUTD BuildSomething 2019, a week-long SolidWorks & Arduino workshop course held in collaboration with SUTD Entrepreneurship Centre, with the end product of a line-tracing robot.
  - Manned Jessica, a robot barista, at Singapore MINDEF Innovation Symposium 2019, which was held at SUTD, to serve coffee for about 50 personnel.
  - Improved the skills and proficiencies of about 30 members of the club by organizing 6 workshops that cover robotics and other technical concepts (SolidWorks, Arduino, PID, Git, Linux and ROS).
  - Leading a project team in building a Stanford Doggo with a stretch goal of implementing autonomous navigation for the Doggo.
  - Led a team of 10 in building a working 7 kg Linorobot with dimensions of 300x215x102mm, equipped with a ROS autonomous navigation stack.
- **Saints for Christ** Singapore  
*Vice-President (Admin)* *Apr 2017 - Apr 2018*
  - Managed the administrative side of the club with regards to event proposals, scheduling and community documentations.
  - Produced a video for Easter Week 2018, a publicity brochure and an animation of Saints for Christ's logo.

## Work Experience

- **Mathvision Enrichment Centre Pte. Ltd.** Singapore  
*Assistant Teacher* *Mar 2019 - May 2019*
  - Taught Physics for the IB (SL and HL), Singapore-Cambridge GCE A-Level (H2), AT (Computational), EDEXCEL AS Level, EDEXCEL International GCSE (9-1) - Science Double Award, SAT and Cambridge IGCSE (Pure and Co-Science) syllabi.
  - Taught Mathematics for the IGCSE - CIM (Core and Extended) and UKMT (JMC) syllabi.
  - Rated by **75%** of students taught as **Excellent** and by **22%** of students taught as **Good**. The other 3% did not submit a rating.
  - Had mastery of the content and ability to explain clearly and patiently.
  - A brief exposure to the office work ethic of the professional world.

## Projects

- **V2X Implementations** Singapore  
*Team Coordinator & Software Specialist* *Sep 2019 - Present*
  - Coordinating a team of 4 in studying and implementing the applications of V2X devices in real-life vehicles.
- **Olethros Bot** Singapore  
*Chief Developer* *Sep 2019 - Present*
  - Developing a Telegram Bot in Python with miscellaneous commands for my current SUTD Class. Utilized MongoDB Atlas for database management and Microsoft Azure for cloud deployment.

- OpenSUTD Landing Page**

Singapore
  - Main Developer*

Sep 2019 - Oct 2019

    - Developed the landing page for OpenSUTD, an open-source movement dedicated to build a community in SUTD that embraces open sharing and collaboration. Utilized HTML, CSS and JavaScript to achieve a clean and elegant look for the webpage.
- The Spread Bot**

Singapore
  - Chief Developer*

Mar 2019 - Sep 2019

    - Developed a Telegram Bot in Python for The Spread, a café/food bar in NUS Business School, with order and payment capabilities. Utilized PostgreSQL for database management and Heroku for cloud deployment.
- WhiteHacks@SG**

Singapore
  - Team Leader*

Feb 2018

    - Participated in a 2-day cybersecurity workshop and penetration-testing competition.
    - Managed to be in the Top 10 out of about 50 groups (Team //TODO).
- Energy Innovation Challenge**

Singapore
  - Team Leader*

May 2017 - Jul 2017

    - Project: Supernova.
    - Had Urban Heat Island as the theme.
    - Designed a solar thermophotovoltaic cell prototype as a proof of concept under the supervision of Mr Arief Suriadi Budiman, an Assistant Professor at SUTD.
    - Increased the efficiency and power output of a solar PV cell by about 15% by retrofitting thermoelectric cells at the posterior of the cell.
    - Attended the various workshops (on Microcontrollers and Datalogging) at the Science Centre to upgrade my skills.
- Arduino Weather Station Workshop Competition**

Singapore
  - Software Developer*

Mar 2017

    - Assembled a weather station as a team of 3 from the provided components.
    - Wrote simple Arduino code for the data collection of weather conditions around the venue.
    - Obtained 12th place in terms of accuracy.
- Other Projects**

At Home
  - 2017 - Present

    - Currently designing a video game in GameMaker Studio 2.
    - Currently maintaining a personal website and several other repositories on GitHub.
    - Occasionally participate in the Laptop Hacking Coffee CTF during spare time.
    - Created a small, unfinished quiz mini-game on Adobe Flash just for fun.
    - Taught Mathematics and Physics to a student as a private tutor for admission to a Computer Science Course in a Taiwanese University.
    - Helped out my junior in setting up the Donkey Car software in a Raspberry Pi for his NUS H3 Science Research Programme project on a self-driving car algorithm.
    - Participated in a mini design sprint in SUTD with Design Odyssey. Created a prototype of a joystick device that helps visually-impaired people to play simple games (like Pac-Man).
    - Helped out as an Assistant Teacher for a Micro-Bit Workshop conducted by IES-SUTD at Science Centre Singapore.

## Awards

|  |             |
|--|-------------|
| SUTD ASEAN Undergraduate Scholarship   | 2019 - 2022 |
| Ministry of Education (Singapore) - Undergraduate Tuition Grant                              | 2019 - 2022 |
| SAJC Jacob Ballas Awards - Scholars' Awards (4 Distinctions)                                 | 2019        |
| SAJC Mrs. Grace Ballas Scholarship   | 2018        |
| SAJC Service Award (Saints for Christ)   | 2018        |
| SAJC Talent Development Programme Certificate  | 2018        |
| St. Andrew's Hall Model 2-Bedder Room (Boys) - Certificate of Achievement                    | 2018        |
| Energy Innovation Challenge - Category 2 Popularity Prize                                    | 2017        |
| Energy Innovation Challenge - Category 2 Merit Prize   | 2017        |
| Australian Mathematics Competition (Senior Division) - Certificate of Credit (Top 30%)       | 2017        |
| 30th Singapore Physics Olympiad - Certificate of Participation                               | 2017        |
| Designing with TI-84+ Colour Graphing Calculators Competition - Certificate of Participation | 2017        |
| St. Andrew's Hall MOE SPARKS: Hostel-Based VIA Programme - Certificate of Participation      | 2017        |
| SAJC 5th Saints MUN Conference - Certificate of Participation                                | 2017        |
| SAJC Exemplary Character Award   | 2017 - 2018 |
| SAJC Outstanding Class Conduct Award   | 2017 - 2018 |
| SAJC Commendation Award (Science Stream)   | 2017 - 2018 |
| Singapore Mathematical Olympiad (Senior Section) - Silver Award                              | 2016        |
| Singapore Junior Chemistry Olympiad - Certificate of Merit                                   | 2016        |
| Ngee Ann Engineering Challenge (5-EngXplorer) - Certificate of Achievement (Champion)        | 2016        |
| Enigma Mathematics Competition - Certificate of High Distinction (Grades 9/10)               | 2016        |
| Enigma CAT Competition - Certificate of Distinction (Grades 9/10)                            | 2016        |
| MOE-NUS Amazing Lab Race - Certificate of Participation                                      | 2016        |
| ACS(I) Science Research Challenge - Certificate of Merit                                     | 2016        |
| ACS(I) Choir - Certificate of Commendation   | 2016        |
| Singapore Mathematical Olympiad (Senior Section) - Bronze Award                              | 2015        |
| Singapore Mathematical Olympiad (Open Section) - Certificate of Participation                | 2015        |
| Singapore Sports Hub Official Opening (Youth Celebrate!) Contribution Certificate            | 2015        |
| ACS(I) Academic Award - Top Student  | 2015        |
| ACS(I) Pastoral Care Award   | 2015        |
| ACS(I) Cleanest Room Award   | 2015 - 2016 |
| ACS(I) Inter-class Mathematics Challenge - Certificate of Distinction (Top 10%)              | 2015 - 2016 |
| United Kingdom Intermediate Mathematical Challenge - Gold Certificate                        | 2015 - 2016 |
| Ministry of Education (Singapore) - ASEAN Scholarship  | 2015 - 2018 |
| National Mathematical "Vector" Olympiad - Third Prize  | 2014        |
| Gloria School Scholarship  | 2014        |
| National Indonesian Science Olympiad (Mathematics) - Finalist                                | 2014        |

## Skills

**Digital Achievements:** Hack The Box - "Hacker" Rank, Codewars - "6 kyu" Rank.

**Languages:** Python, C/C++, C#, Java, JavaScript, HTML, CSS, SQL, Visual Basic,  $\text{\LaTeX}$ .

**Frameworks:** ROS.

**Operating Systems:** Linux (Ubuntu), Windows.

**Miscellaneous:** Strong verbal and written communication skills, exceptional problem-solving skills, good team skills. Excellent attendance, punctuality, life skills and character development. Democratic coaching as leadership style.

## Interests

**Sports:** Swimming and playing badminton.

**Computers:** Software development and robotics. Tinkering with video games - memory scanning, debugging and hex editing on Windows and Android. Learning image, audio and video editing.

**Musical:** Singing.

**Others:** Teaching and design thinking.