

## 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/>
  - Was involved in Saints for Christ as Vice-President.
  - 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.
  - Produced a video for Easter Week 2018, a publicity brochure and an animation of Saints for Christ's logo.
  - 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 Organization of Autonomous Robotics** Singapore  
*Vice-President* *Jun 2019 - Present*
  - Led a team of 10 in building a working 7 kg Linorobot with dimensions of 300x215x102mm, equipped with a ROS autonomous navigation stack.
  - Organized 3 technical workshops that cover robotics concepts (Solidworks, Arduino and PID) to assist about 30 members of the club.
  - Leading a project team in building a Stanford Doggo with a stretch goal of implementing autonomous navigation for the Doggo.

## 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.

## Main Projects

- **V2X Implementations** Singapore  
*Team Coordinator & Software Specialist* *Sep 2019 - Present*
  - Coordinating a team of 4 in assembling V2X devices and implementing the applications of V2X devices in real-life vehicles.
- **OpenSUTD Landing Page** Singapore  
*Main Developer* *Sep 2019 - Present*
  - Developing 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.
- **Olethros Bot** Singapore  
*Chief Developer* *Sep 2019 - Present*
  - Developing a Telegram Bot in Python with miscellaneous commands for the purposes of my current SUTD Class. Utilized Microsoft Azure for cloud deployment.
- **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:** Currently writing Python software at home. Tinkering with video games - memory scanning, debugging and hex editing on Windows and Android. Learning image, audio and video editing.

**Musical:** Singing.