

VYJAYANTI VASUDEVAN

6, Tai thong crescent, 16-01, Singapore - 347840

Mobile no.: +65-93385207; Email : vasudevan773999@sas.edu.sg

U.S. Citizen & Singapore Permanent Resident

EDUCATION

Singapore American School, Singapore	2018 – Present
– U.S. High School Diploma with Advanced Placements & Advanced Topics, currently Grade 12;	
Stamford American International School, Singapore	2013 - 2018

STANDARDIZED TESTS AND APs

- SAT Reasoning Test: Total – 1539; Reading and Writing – 750; Math – 780 (98th percentile) 2024
- AP Examinations: Statistics – 5(2023); Computer Science – 4(2023); U.S. History – 4(2024); Calculus BC - 4(2024)

ACADEMIC HONORS AND AWARDS

- British Science Association (**CREST Gold Research Award**) given for the research done with Dr. Debajyoti Roy to look at the impact of diabetes and kidney disease on bone density in elderly patients 2024
- AP Scholar Award 2024
- SAS Scholar 2022-2024
- SAS Scholar Subject Excellence Award: Chinese, Intermediate High 2022
- Marine Advanced Technology Education ROV Ranger ASEAN Competition 1st Place 2024
- Inspire AI DNA Detectives Project - team received first place vote. 2023
- Best Delegate and Excellence in Bill Writing - Harvard Model Congress Asia 2022 – ASEAN 2022

STEM RESEARCH AND EXPERIENCES

Research:

- Changi General Hospital, Singapore** (April 2023-present)
- Worked alongside on my personal initiative with Dr. Debajyoti Roy from CGH (Department of Nephrology) to look at *the impact of diabetes mellitus and chronic kidney disease on bone mineral density and the effect of increasing HbA1c on BMD in subjects with diabetes.*
 - Used patients' database to better understand the effect of multiple medical comorbidities on bone strength in elderly population
 - Was able to apply my statistics to interpret the information obtained
 - Published Conf. Paper in Indian Society of Nephrology (ISNCON2023) and a Journal Article (under review) in the Archives of Osteoporosis. Won the British Science Assoc. (**CREST GOLD award**)

- Inspire AI** (Artificial Intelligence program developed and taught by Stanford/MIIT alumni/graduates) (2023-2024)
- Worked in a team of 5 global students and learnt to use Artificial Intelligence and Machine Learning. They used this knowledge to map COVID strains by reading the genetic sequence and determine the origin of the strains, predict outbreaks and contain it in time.
 - Used Artificial Intelligence and Machine Learning techniques and perform an in-depth analysis and wrote "*Investigating Sexual Assault Rates Using a Holistic Approach*" - Accepted to The Curieux Academic Journal mentored by Mr. Joel Ramirez from Stanford University

- Mu Alpha Theta/ SAS Math Journal (Singapore American School)** (April 2023)
- Co-authored a research paper exploring the limitations of the Malthusian Population Growth Model and other potential alternatives. Published in the school's Journal of Mathematics.

Competitions

- Marine Advanced Technology Education (MATE) Robotics** (2024)
- Placed first in ASEAN
 - Participated in World Championship in Kingsport TN

British Science Association - CREST GOLD award for the research done with Dr. Debajyoti Roy (2024)

Leadership

- Marine Advanced Technology Education, Robotics, Singapore American School** (August 2021 - Present)
- Officer & Software Engineer Lead:
 - Develop robots that have to perform tasks underwater
 - Programmed the underwater ROV using Arduino C
 - Worked with MATE to ensure it adheres to the requirements of the published rubric & created schematics for the electronic layout in the ROV.

- Increased membership by 2-fold during tenure

Geek Girls, Singapore American School

(Aug 2021-Present)

- Co-President :
 - Organized webinar aiming to raise awareness about women in STEM.
 - Arranged weekly meetings with other Co-Presidents featuring science experiments and informational presentations to help foster a love for Science at Singapore American School

Spectrum, Singapore American School

(August 2021 — Present)

- Editor-in-Chief:
 - Releases a semester magazine compilation and science editor.
 - Finalizes edits, layouts and designs of the magazine and responsible for its publication.
 - Contributed individually the following articles:
 - *The Applications of Artificial Proteins and what it means for the future of medicine.*
 - *The History of Opium.*

Spacelab, Singapore American School

(2023 - 2024)

- Head Software Engineer
 - Designed space experiments in collaboration with NASA
 - Involved growing *Pestalotiopsis Microspora* in a microgravity environment and observe the ability of this species to breakdown plastic (Polyurethane) and compare with a control experiment on Earth
 - Created program using PyQt and Taught and led software and electrical engineers in SpaceLab space experiments with NASA

Internships

Asteria Aerospace (leading Indian Aerospace Startup), Bangalore, India

(Dec 23-Jan 24)

Used Linux programming between GDT (Ground Data Terminal) and drone to establish real time connections and data exchange

Stanford Anesthesia Summer Institute (SASI)

(Jul 24 - Aug 24)

Clinical Science, Technology & Medicine Summer Internship Program

Able to interview patient advocates, developing patient centered care and introduction to various medical specialities

OUTREACH AND MENTORING

Friends of Genesis (Associated with Genesis School for Special Ed.)

(August 2021 — Present)

Co-President:

- Organized trips for SAS students to visit the School for Special Education as Teaching Assistants.
- Arranged bake sales, events, and other webinars to support the Genesis School.

Coding for All (Singapore American School)

(August 2021-June 2023)

Tutor:

- Best Tutor Semester 1 voted by students
- Participated in tutoring Java programming to under-privileged students.
- Helped create slideshows featuring Advanced Placement Computer Science

Sri Sathya Sai Karuna Nilayam Foundation (SSSKNF) working with Eastern Medical Service (EMS) Hospital, Batticaloa Sri Lanka

(2020-current)

- Initiated Women's empowerment program that trained underprivileged women as hospital hygienists and janitorial staff. Broadly seen as a success story in the hospital.

SCHOOL SOCIETIES AND MUN

- National Science Honor Society (Member) 2022-current
- SEOMUN United Nations Development Programme (President) 2023
- CHEMUN Historical Security Council (Deputy Chair & Student Officer) 2022
- SASMUN Historical Security Council (Assistant Deputy Chair) 2023
- National English Honor Society (Member) 2022-current

INTERESTS: SKIN CARE - love learning the history, science & economics behind all the skin care products and latest releases, True crime documentaries, Boba (Can't live without it), programming, and Murakami & Siddhartha Mukherjee (Fangirl)