

SUMEDH MITTAL

61 Grange Road, #07-01, Singapore 249570 | sumedhmittal100@gmail.com | +6587534046
www.sumedhmittal.com

EDUCATION

Singapore American School

Aug 2021 - May 2025

- American School Diploma with APs and ATs
- **GPA:** 3.55 (Cumulative)
- **Honor Courses:** PreCalculus with Parametrics, AP Calculus AB, AT Computational Physics, AP Computer Science, Accelerated Biology, AP Microeconomics, AP Macroeconomics, AT Entrepreneurship

Research Paper

How Will Metaverse Change Racial Inequality?

2022

Explored how Metaverse could impact racial inequality in the workplace, focusing on risks such as digital divides and virtual racism.

ROBOTICS&ENGINEERING

Intern, NUS Lab for Soft Robotics Research, Singapore (6 weeks)

Jun 2024 - Jul 2024

- Worked under **Prof. Cecilia Laschi**, Mechanical Department, National University of Singapore (www.softroboticslab.info), an authority on soft robotics.
- Innovated and enhanced the functional applications of octopus-inspired suction cups.
- Investigated the principles behind octopus suction cups and analyzed how changes in variables within their schematics affect their strength.

Underwater Robot Project

Dec 2023 - Jul 2024

- Built an Underwater Robot (www.xxxx.com) designed to map the seafloor for debris.
- Collaborated with Dr Tan Koh Siang, Senior Research Fellow and the Head of the Marine Biology and Ecology Laboratory at the Tropical Marine Science Institute (TMSI) to observe marine life.

School Robotics

2013 - Ongoing

- Represented Singapore American School's FRC team in various regional and world competitions in 2023 and 2024; **driving strategic decisions as Captain for the 2024–2025 season, resulting in top-tier placements.**
- Represented the school in VEX Robotics World Championship in Dallas (May 2022) & an independent team at VEX Robotics World Championship in Kentucky (Apr 2018); also appointed as a referee for the finals in Dallas.
- Coordinated the inaugural MATE Robotics Tournament at Singapore American School (April 2024), engaging 12 teams and fostering a competitive yet collaborative environment.

Intern, Playware, Singapore (2 weeks)

Jul 2022

- Collaborated with the development team to refine their app by contributing insightful suggestions aimed at enhancing the functionality and improving the overall user experience.
- Gained hands-on experience in software development.

UCLA Engineering Design: Aerospace Engineering - Planes (4 weeks)

Jun 2022 - Jul 2022

- Engineered and optimized a remote-controlled airplane through advanced CAD software, enhancing performance parameters by 23% using detailed simulations.

ENTREPRENEURSHIP

Launch X, University of Michigan (4 weeks)

Jun 2023 - Jul 2023

- Accepted into Launch X (www.launchx.com) a prestigious and highly competitive program (typical acceptance rate 14%).

- Co-founded and launched Cultura Caja (www.culturacaja.com) in the US, introducing children and families to global cultures through curated snack boxes sourced from diverse regions, reaching over 50 customers within the first day.
- Expanded operations in Singapore (www.culturexpress.com), adapting the product offering to cater to local market preferences.
- Collaborated with SINDA, a Singaporean NGO to distribute these boxes and support community initiatives.

Pillows For Cause

Jun 2020 - Jul 2022

- Co-founded with my twin brother, a pandemic-era company 'Pillows For Cause' specializing in lavender-based products.
- Established a comprehensive online presence by developing a website enabled with an end-to-end payment mechanism to ensure seamless customer experiences and operational efficiency.
- Designed and sold custom lavender pillows, generating \$1,750 in revenue and used 100% of profits to fund educational programs in rural India through the Ekal Vidyalaya Foundation (www.ekal.org).

CUSTOMER SERVICE&SUPPORT

Internship, Lyra Health Singapore Pte. Ltd., Singapore (4 weeks)

Jul 2023

- **Customer Interaction:** Managed client interactions with efficiency and professionalism, ensuring a positive and supportive experience for those seeking counseling services.
- **Financial Management:** Oversaw payment processing and billing procedures, maintaining meticulous records of financial transactions and appointment schedules while ensuring confidentiality.
- **Process Optimization:** Streamlined day-to-day processes, optimizing resource utilization and improving overall productivity.

Internship, Shabistan (Middle Eastern Restaurant), Singapore (2 weeks)

Jul 2022

- **Customer Interaction:** Enhanced communication, marketing, and customer service skills during internship as a server.

TEACHING & MENTORING

Teaching Assistant, Robotics

Jan 2024 - May 2024

- **Curriculum Enhancement:** Introduced creative methods to make the syllabus more engaging and practical.
- **Hands-On Projects:** Led introduction of go-kart and underwater robot projects, fostering experiential learning.
- **Skills Development:** Guided students in fabrication and CAD design, deepening their understanding of robotics.

Robotics Mentoring

Aug 2021 - Ongoing

- **Team Leadership:** Mentored Elementary and Middle school students for 3 to 6 hours per week, leading 16 teams in FLL competitions from 2021 to 2024, with 5 teams winning awards in various categories.
- **Annual Workshops:** Served as a lead mentor in 2023 and 2024 at Google-sponsored workshops, guiding 40 neurodivergent students from Pathlight School in robotics and technology.
- **Community Outreach:** Led a 2024 robotics workshop at Orange Valley Nursing Home, mentoring 20 elderly residents on robotics projects, including designing and building a prosthetic arm.

ADDITIONAL COMMUNITY OUTREACH

- Raised \$2000 for Ekal Vidyalaya Foundation (www.ekal.org) supporting education in tribal districts in India through events, donation of profits from 'Pillow for Cause'; have adopted a school since 2016.
- Distributed food packets every week to 10 needy households in Singapore since Mar 2023 as a volunteer for Willing Hearts (www.willinghearts.org.sg).

AWARDS & ACHIEVEMENTS

- Dean's List nomination for outstanding dedication and contributions to robotics education (2024).
- Honors List: Grade 10 and Grade 11.
- First Place at ASEAN - Singapore Regional MATE ROV Competition (Apr 2024).
- Design Awards at Vex IQ Regional Competitions at Manila (Nov 2019) and Singapore (Feb 2019).
- Innovation Award at VEX Robotics World Championship in Kentucky (Apr 2018).
- Champion's Award at FLL Singapore (Mar 2018).
- Robot Award at FLL Singapore (Mar 2018) for excellence in robot design.
- Trinity Guildhall: Grade 4 with Distinction for Drama (2021).

EXTRACURRICULARS

- **Cricket:** Founding member and Vice-Captain of the School Cricket Team (2013 - Ongoing).
- **Squash:** National-level competitor in Singapore (2013 - Ongoing).
- **Deep Sea Diving:** Certified SSI Advanced Open Water Diver (Jan 2021) in Singapore; qualified for dives up to 30 meters.

SKILLS

- **Languages:** Proficient in English and Hindi; basic in Mandarin and Spanish.
- **Coding:** C++, Python, HTML, Java, Arduino IDE, Fusion 360 and SolidWorks.
- **Fabrication:** Metalwork, woodwork, CNC milling, 3D printing and laser cutting.