

SHUBHAN ANCHAN

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EDUCATION

Bombay International School (BIS), Mumbai June 2024 - 2026

- **Grade 12 IBDP:** Early Predicted Grade: 33/42
- Math AA HL (5), Physics HL (4), Economics HL (6), Chemistry SL (6), Spanish AA SL (5), English LL SL (5)

Bombay Scottish School (BSS), Mumbai June 2020 - 2024

- **Grade 10 ICSE:** Overall percentage: 95.8%

STANDARDIZED TESTS

SAT Score: 1370 (Math: 730; EBRW: 640) June 2025
IELTS Score: 8 July 2025

ACADEMIC AWARDS AND HONORS

Class Topper, Grade 10, Bombay Scottish School, Mumbai May 2024

- Awarded for securing the highest score of 100/100 in Chemistry, History and Civics in the ICSE board exams.

Runners-Up, Young Entrepreneur Conference, The Doon School, Dehradun August 2025

- Secured 2nd place from over 22 participating teams across India.
- Member of Crisis Committee responding to crises from Cartel actions in drug trafficking, money laundering and cyber-crime.

Winner, Junior Innovator Category, World Robotics Olympiad – India June 2022

- Built an HVAC duct cleaning robot from the ground up, including code for control and business pitch.
- Participated in WRO-India, Junior Innovator category alongside 2 team members.
- Silver Medallist WRO-Global, Dortmund, placed 7th in 95 teams.

ENGINEERING RESEARCH AND EXPERIENCES

Intern, Asteria Aerospace, Bangalore July 2025

- Interned with Mr Sasitharan, Head of Verification and Validation department. Studied: applications of drones in surveillance, reconnaissance, agriculture and logistics, focused on detection, recognition and identification (DRI) of humans and objects; and design and construction of drone systems comprising imaging, electronic speed control, power distribution communication and auto-pilot systems. Prepared a report on the application of YOLO and OpenCV towards improving DRI accuracy and efficiency.

Intern, Magenta Mobility, Mumbai February 2025

- Interned with Mr Shashank Sathe, Chief Technology Officer. Understood an EV fleet (load, turnaround, service levels) requirements for delivering logistics services. Prepared battery configuration report (main & auxiliary) to meet EV requirements (electronic systems, torque).

Observer, Robotic Surgery to address Fibroid Uterine Endometriosis, Jaslok Hospital September 2025

- Observed robotic surgery conducted by Dr Abhishek Mangeshkar, Gynaecology & Obstetrics Surgeon, Jaslok Hospital. Explored Da Vinci XI robotic surgery system deployed for precision surgical tasks (precision videography, precision control). Understood robotic surgery benefits (remote access, complex dissection, precision suturing, speedier patient recovery, surgeon fatigue reduction).

INNOVATION AND OUTREACH

Researcher, Epileptic Seizure Detection & Classification App. **Winner of Gold Crest Award** November 2024

- Learnt coding using Python, and UI development, and studied indicators of epileptic seizures.
- Used AI and neural networks to analyse anonymized Electroencephalography (EEG) data from TUH-NEDG and CHB-MIT databases.
- Curated a program to help doctors analyse EEG data more efficiently (85% reduction in detection & classification time) achieving an accuracy of 95%+
- **Winner of Gold Crest Award 2024**; India Finalist at the IRIS National Fair 2024; Patent pending with India Patent Office (App. No. 202541033595)

Learning Initiatives

AI Student, Nurturing AI Innovators program November 2023

- Learnt the basics of machine learning from Dr Pavlos Protopapas, a professor at Harvard University.
- Studied the mathematics behind and applications of Convolutional Neural Networks (CNNs).
- Analyzed image recognition templates and explored how changing variables impacted output.

Robotics Student, Maker Project, The Innovation Story, Mumbai July 2023

- Studied under the guidance of Mr. Jaykumar Patel, Program Manager – Nurturing Innovators Program
- Learnt the skills of Arduino coding, app development, 3D printing, fabrication, PCB making and soldering.
- Built an app-controlled robotic arm from scratch with six degrees of freedom for differently-abled people.

Independent Experimentation

Developer, Assessing the Impact of Neodymium Magnets towards Frictionless Deceleration of Aluminum Flywheel, Bombay International School Mumbai September 2025

- Developed experimental Faraday's law- and Lenz's law-based analytic model for eddy current braking, validating magnet positioning impact on flywheel deceleration. Utility: simulated frictionless braking design, under alternate use conditions. Interest: frictionless braking, owing to sensor-based automation potential and material efficiency.

Developer, Assessing the Impact of Ballast Weights towards adjusting Depth of Submergence of Object in Liquid Medium, Bombay International School Mumbai May 2025

- Developed experimental, analytic model validating ballast weight impact, considering Plimsoll line simulation, on depth of submergence of immersed object. Utility: simulated ballast systems design for discrete objects in discrete liquid media. Interest: depth of submergence control post beginner's scuba diving course in Thailand.

Online Courses

Fundamentals of Flight Mechanics, Institut supérieur de l'aéronautique et de l'espace (ISAE SUPAERO) September 2025

- Learnt the basics of flight and its controls, including countervailing effects of thrust, drag, lift and weight.

ROBOTICS ACHIEVEMENTS

Runner-up, First Technology Challenge: Asia Pacific Open Challenge, Sydney July 2023

- Placed 2nd among 33 participating teams worldwide, competing towards efficiently re-positioning cubes and cones, in a defined sequence at defined locations.

Semi-Finalist, First Technology Challenge, Pune March 2023

- Secured a spot in the semi-finals of FTC PowerPlay India from over 70 teams across the country, competing towards accomplishing defined robotic tasks with optimal energy and speed.

Innovate Award Winner, First Technology Challenge, Pune March 2022

- Participated in the FTC Freight Frenzy as part of the team GForce. Secured 4th place, along with individual award.

Fourth Rank Holder, BSS Strike-a-Deal Competition, Mumbai July 2022

- Created a low-cost tablet, Edutab, to make online learning easier for high school students. Used foundations in app design and incorporated features to enable better student-teacher interactions.

STEM OUTREACH AND ENGAGEMENT

Teaching Assistant, Sitaram Mill Compound School, Mumbai July 2025

- Taught 30 middle school students basic concepts of Physics and Chemistry. Curated lesson plans to improve reading and writing skills in regional languages of Hindi and Marathi.

STEM Educator, Local Schools, Mumbai May 2023

- Partnered with schools like Ajmera Global School, Boys Town School, Farvashi International Academy & MET and taught basics of robotics to 300+ students as a part of FIRST Tech Challenge's social outreach program. Guided participation of teams from above schools in the World STEM & Robotics Olympiad 2023. Guided participation of teams from above schools in the World STEM & Robotics Olympiad 2023.

Video Editor, Aarya Foundation, Mumbai December 2022

- Created a video, summarizing NGO milestones for 2022 and posted it on their Facebook page. Designed 5 fliers to spread awareness on the NGO's activities for education for the underprivileged and sanitary care, as well as marketed the NGO's activities online and offline to help recruit volunteers, seeing a 25% increase in enrolment.

STEM Educator, SSRVM High School, Mumbai February 2022

- Conceptualized and launched a fundraising page on Ketto, and raised USD 5,000 for SSRVM High School.
- Set up a functional science and technology laboratory to help students engage in practical learning.
- Trained 50+ students in LEGO 96-86 over 2 in-person sessions.

SKILLS AND INTERESTS

Languages: English, Spanish, Hindi, Marathi

Interests: Physics, Engineering, Robotics, Mathematics, Football, Video Games, Science Fiction

Skills: Coding (Python, Java), 3D Design (Blender, Fusion 360, Solidworks), Computer-Aided Design (CAD), Video Editing (Adobe Premiere Pro, After Effects, Final Cut Pro), Animation and Special Effects.