

## Aaryamann Goenka

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**Bombay International School**, Mumbai, India

Anticipated Graduation: May 2027

IB: Math AA, Physics, Chemistry (HLs); Economics, English LAL, Hindi (SLs) • IGCSE Grade 10: 9 A\*s

SAT: 1560 (800 Math) • AP Microeconomics: 5 •

Head Boy (2024-25); Tech Secretary (2025-24); Founder, AI Club & President, Engg Club (2023-24)

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## ENGINEERING, TECHNOLOGY, AND RESEARCH

**Founder & Developer, Beetlebot**, Mumbai

May 2024 - present

Built quadruped fire rescue robot w/ Arduino Nano, servos for navigation, assessment, & hazard response

- Integrated Wi-Fi camera with night vision and audio, 6-channel RC receiver for long-range control
- Pitched to DRDO; recd appreciation from Officer-in-Charge, Fleet Testing/Tuning Dept, Naval Dockyard
- Presented prototype to 200+ attendees at the Fire Safety Assoc of India Mumbai Conference

**Product Intern, Hippo Technotex**, Gujarat

July 2024 - present

Developed Beetlebot & working on & testing ReliefRoof, a next-gen, ultra-low-cost, all-weather roofing material

**Developer, Khadify: Smart Compost Bin**, Mumbai

Jun 2023 - present

- Visited farms in Maharashtra to study composting. Created a smart compost bin that analyzes compost and suggests homegrown ways to improve composting speed, quality, and cost-efficiency
- Prototype powered by IoT with the entire project being done on open source

**CAD Designer, G-Force Team**, First Tech Challenge, Mumbai

Sep 2024 - Mar 2025

- Contributed as the 3-D CAD designer of the G-Force Team
- Won Think Award at Kazakhstan Natl Championship, Inspire Award & 2nd Place at Natl Championship

**Research Work** (September 2023 - Present)

- **Independent Author, Research Project on Mangrove Erosion Modelling** Sep 2025 - present  
Conducted literature review and comparative analysis of mangrove datasets; developed Python code to map Hansen Global Forest for assessing regional forest loss in Mumbai. Simulated mangrove impact on shoreline erosion using ANSYS/MATLAB to evaluate coastal protection and model long-term erosion patterns
- **Co-Author, Research Project on Corrosive Properties of Beverages**, Mumbai Sep 2023 - May 2024  
Investigated the erosive effects of common beverages on tooth enamel by employing eggshells as surrogate materials to address public health dental concerns. Awarded the Gold CREST Award in May 2024

**Observerships**, Defense Research & Development Org & Indian Institute of Technology, Delhi

Jun - Jul 2025

- Examined fire safety protocols in defense. Recd feedback to improve fire safety robot's functionality
  - Explored research in on-ground & underwater electronics; studied advanced applications of electronic systems
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## COMMUNITY SERVICE

**Co-Founder @ CyberDost, an Anti-Cyberbullying Campaign**

Jul 2024 - present

- Led awareness seminars for 1000+ students and teachers on cyber safety and youth action.
- Organised mental health art exhibition & expert panel with *Brush of Hope* to promote safe online practices
- Pitched to Zee leadership for adoption across 100 schools and launched a petition for stronger cyberbullying laws, securing 1300 signatures & endorsement from State Department of Education

## COMPETITIONS AND AWARDS

**International and National Olympiads** (Feb 2024 - Dec 2024)

- **Silver Medal**, Hong Kong International Science Olympiad
- **Distinction in Pascal Contest**, University of Waterloo
- **Gold Medal**, Singapore and Asian School Math Olympiad

**IGCSE World Topper** in Additional Mathematics (August 2025)

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## TREKS, TRAILS, AND MORE

**Trekking** (Jul 2024 - present): NOLS New Hampshire Backpacking Adventure: 15-day trek (65 miles), Sandakphu Phalut Trek, West Bengal (50 miles), Uluru Kata Tjuta National Park Trek & Uluru Base Walk, Australia (10 miles)

- Created an Android app to help trekkers navigate, connect, & share memories along their paths

**Skills:** Python, C++, Arduino, Fusion 360, IoT sensors (ESP32, ...)

**Hobbies:** Alpine Skier (Black Diamond Slopes), Open Water Certified Scuba, Badminton, Rock & Pop Guitar (Trinity College Grade 2 with Merit)