**ARJUN SHAH**

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**EDUCATION**

**Ahmedabad International School**, Ahmedabad, India 2012-Present

* *International Baccalaureate Diploma Program (IBDP), Grade 12 (Ongoing)*
* *Cambridge IGCSE Board Examinations, Grade 10*

**STANDARDIZED TESTS**

SAT: Total - 1440 (Math 780; English 660)

IELTS:

**ACADEMIC HONORS & AWARDS**

*School*

* First in School in French in IB – 1 2024
* International Certificate of Education with Distinction, IGCSE Grade 10; Received 2 A\*s 2024

*International*

* University of Waterloo, Sir Isaac Newton Physics Contest, Certificate of Distinction May 2025
* University of Waterloo, Fermat Math Competition, Certificate of Distinction Feb 2025
* University of Waterloo, Avogadro Chemistry Contest, Certificate of Distinction May 2025

**PATENTS & INNOVATION**

* **Decision Review System for Cricket** 2024-2025
* Developed a low-cost decision review app with ball tracking technology for local cricket games, mentored by professor at Indian institute of Technology, GN, to help umpires improve decision making, synthesizing concepts from physics with machine learning and python programming. Filed for a Design IPR and Utility Patent
* **Animal Neck Collar Based Energy Harvesting (Shaking TENG Capsule)**
* Designed an energy-harvesting collar made from recycled textile waste; Device converts mechanical energy to electrical energy based on principle of electrostatic induction using a capacitor to store energy; Can be used to power sensors for monitoring and tracking of animals; Filed for a Design patent

**BUILDING LIVES THROUGH SOLAR TRAINING**

**Renesys Power Systems (Company engaged in building PV Solar plants),** Ahmedabad, India2025

* Created service manual for maintaining Solar PV plants and a manual for training new technicians and engineers
* Currently providing training in Solar plant maintenance to over 10 new technicians helping them get skills to earn a living

**STEM EXPERIENCES & RESEARCH**

*Research & Internships*

* **Aerotherm Products (Heat Exchanger Manufacturing Company),** Summer Intern,Ahmedabad, India2024 & 2025
* Final output: Authored a detailed report titled “Reducing Industrial water requirements with improved heat transfer solutions”; Study used by sales team to educate their clients about heat exchanger designs that can help reduce water consumption and enhance sustainability
* Compared Air-cooled v/s Water-cooled heat exchanger designs on various parameters like mechanical design, total cost of ownership, environmental impact etc.
* Visited client site (IFFCO - one of the biggest fertilizer plants in India) to understand and observe the critical applications of heat exchangers in continuous process plants
* Used learnings to help contribute to develop new website, to reflect the current workings at the firm to help get new clients. Involved in content creation, editing of corporate video and brain storming website ideas
* **Renesys Power Systems (Company engaged in building PV Solar plants),** Summer Intern, Ahmedabad, India2025
* Involved in testing a new PCB to be used in controlling / optimizing input power sources in a residential system; Used electrical measurement tools like Multimeters and Oscilloscopes
* Learnt about RMS (Real time monitoring system), different types of communication to transport data, and how to interpret data from various sensors in the solar plant; Site visits to mega-watt scale solar plants in Patan, Jamnagar etc;
* **First Author, Research Paper on Green Hydrogen** 2025
* Solar vs Electrolysis Methods for Green Hydrogen Production: A Meta-Analysis of Efficiency, Yield and Cost Performance
* Published in International Journal of Engineering Research (IJOER)

*Design*

* **Vipul Designs (Architecture firm), Observer ship,** Ahmedabad, India 2023
* Shadowed Mr. Naman Shah – a senior architect, on client visits, meetings with construction firms, to see how architects operate; Learnt various software modelling skills like CAD (2-D) and Sketch Up (3-D)

*Competitions*

* **CERN Beamline Competition** 2025
* Co-Authored a research proposal titled, “Investigation of Eddy Currents Generated by Relativistic Charged Particles” with a team of 6 people
* Collaborated with team members from across the world; Team ranked 8/175 of all teams globally

**ENTREPRENEURIAL VENTURE**

* **Co-Founder, Roots (company selling indoor plants for aesthetic and wellness purposes)**,Ahmedabad, India2024-25
* Responsible for Logistics and Operations: Visiting nurseries, choosing plants, organizing deliveries, managing stalls at exhibitions; handling details like transport, stock management & display of products at exhibitions; Sold 100+ plants

**LEARDERSHIP & SCHOOL ACTIVITIES**

* Class Prefect Grade 9th and Grade 11th 2022-23 & 2024-25
* Head of Data Collection Team, School Yearbook 2024
* Lead Organizer, Mega Cup Cricket tournament 2023
* Captain, Cricket Team, AIS & Gujarat Sports Club 2022-23
* Official Photographer for Graduation event and School CAS trip 2024 & 2025

**COMMUNITY SERVICE**

* **Waste Elimination & Environmental Nurturing (WEEN) Foundation, Core team member** 2025
* Student led initiative aiming to educate society about the importance of recycling plastic waste
* Held drives at residential societies to collect plastic PET bottles and recycle them
* Organized panels with industry experts to spread awareness of the need for responsible action to recycle plastics
* **Volunteer, TIDE Foundation** 2024-2025
* Engaged 30+ grade 6 students in activities to develop communication & social skills
* Assisted in curriculum design with seniors at TIDE
* **Threads 4 good, Core member** 2025
* Non-profit, student led organization focused on upcycling textile waste products such as Cotton and Lycra, into bags for needy students
* **International Creativity, Activity & Service (CAS) Project** October 2024
* Taught 20+ underprivileged students at Po Bantey Chey school in Siem Reap, Cambodia
* Painted walls and build parapet bricks for maintenance of school campus

**COURSES, WORKSHOPS AND PROGRAMS**

* Introduction to Mathematical Thinking, Stanford, Coursera June 2025
* Harvard Entrepreneurship Workshop Nov 2024
* Certificate of Completion: AI Scholars Program, InSpirit AI Jun 2024
* Fundamental Skills in Engineering Design, University of Leeds, Coursera Jun 2024

**SKILLS & INTERESTS**

* Computer Programming: Python & Java
* Interests: Cricket, Golf, Travel