

## Anish Raj Garg

A5 1202 World Spa East, Sector 30, Gurugram, Haryana, 122001, India

E: [anishrajgarg08@gmail.com](mailto:anishrajgarg08@gmail.com); T: +91 124 4898390; M: +91 98217 02609; W: <https://anishrajgarg.com/>

### EDUCATION

Heritage International Xperiential School (HIXS), Gurugram, India ( <a href="http://hixs.org">http://hixs.org</a> )	2019 – Present
– International Baccalaureate Diploma Program, Grade 12	2024 – Present
– Cambridge IGCSE Board Examinations, Grade 10	2022 – 2024

### STANDARDIZED TESTS

SAT Score: Total – 1490; English – 710; Math – 780	2025
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### ACADEMIC HONORS AND AWARDS

#### School:

- Academic Excellence in IBDP (top 5%): 40/42 IB Points in Grade 11 2025
- Academic Excellence in IGCSE Board Exams (top 10%): 6 A\*s 2024

#### Global:

- CREST Global Awards: Developing an affordable Air Purifier – Gold 2025
- International Chemistry Quiz – Global Credit 2025
- John Locke Institute: Essay on Economics topic - Global Recognition 2025
- University of Waterloo: The Sir Issac Newton Exam – Global Distinction 2025
- University of Cambridge: Institute of Continuing Education – Global Distinction 2024
- University of Waterloo: Avogadro Exam Contest – Global Distinction 2025
- University of Waterloo: The Sir Issac Newton Exam – Global Distinction 2025
- University of Waterloo: The Hypatia Contest – Global Distinction 2025
- Breakthrough Junior Challenge: Demystifying Quantum Dots – Top 5% 2024
- F1 in Schools World Finals, Damam, Saudi Aramco – Global Sustainability 2024

### CHEMISTRY RESEARCH AND EXPERIENCES

#### *Research:*

**International Centre for Genetic Engineering and Biotechnology, Delhi ( <http://icgeb.org> )** 2025

ICGEB is an Intergovernmental Organisation dedicated to advanced research and training in molecular biology and chemistry

*Summer Intern under Dr Syed Shams Yazdani, Group Leader Microbial Engineering Group*

- Conducted comparative experimental analysis of ‘ $\beta$ -glucosidase’ retention efficiency using different immobilization structures – iron nanoparticles and silica beads, with significant implications on reaction economics in multiple industrial applications
- Authored research paper, “Analysis of Enzyme Retention Using Immobilization Support for  $\beta$ -Glucosidase”
- Qualified for round 2 of S.T. Yau Research competition ( <http://yauaward-asia.hk/> ) and under publication at IEEE
- Presented to Secretary, Ministry of Petroleum and Natural Gas, Government of India, nodal ministry for sustainable biofuels

**Breakthrough Junior Challenge ( <https://breakthroughjuniorchallenge.org/> ), HIXS, India** 2024

Breakthrough Challenge is an innovative concept that challenges high school students to explain a big scientific idea with a short video

- Researched Quantum Dots with their immense potential in medicine and electronics
- Won the top 5% global award basis the video submitted ( <https://www.youtube.com/watch?v=sbHJYusBBG4> )

#### *Online Courses:*

- Our Energy Future, final grade of 87% in 4 week-online course, University of California San Diego 2025

#### *Internship:*

**Air Pollution Action Group, Delhi, India ( <https://a-pag.org/> )** 2025-Present

A-PAG works with the national and state govt. as well as municipal bodies to assist their implementation efforts in fighting air pollution.

*Intern under Ms. Reetoma Roy and Mr. Samarth Ayasya, Program Director*

- Assisted A-PAG and MCG (Municipal Corporation of Gurugram) in improving waste tracking by organizing field data and preparing an analytical presentation for the Commissioner
- Researched AI-based image classification and route-optimization models to enhance waste management efficiency
- Reviewed and benchmarked A-PAG’s website and communication strategy, suggesting data-backed UI/UX improvements

#### *Learning and Observations:*

**AquaAgri, Delhi ( <https://aquagri.in/> )** 2025

AquaAgri promotes seaweed farming in coastal communities and transforms the harvest into agricultural bioproducts

*Trainee Under Mr. Abhiram Seth, CEO*

- Studied the chemical process and R&D involved in converting seaweed into biostimulants, applying advanced chemical mechanisms
- Gained insights into circular economy practices and evaluated the economic feasibility of the process

#### *Innovation:*

**Founder, Swachh Air Swachh India New Delhi, India ( <http://swachhair.in/> )** 2024

Founded an organization that developed an affordable air purifier using 3D-printing and HEPA filter technology

- Conceptualized, 3D-designed, and prototyped a cost-effective HEPA air purifier for personal use; awarded the CREST Global Gold Award
- Value-engineered and promoted the purifier for vulnerable groups; reached 100+ students, secured 2+ sponsors, and initiated scaling to 500+ units across 10+ schools

- Conducted air quality awareness sessions and hands-on workshops for students on pollution control and clean-air solutions
- Designed marketing materials and social media campaigns to advocate for affordable clean-air access

## **STEM MENTORING**

### **Plaksha University, India ( <https://plaksha.edu.in/> )**

May - June 2025

- Guided 60+ students at the Young Technology Scholars program, helping them design and construct projects
- Provided hands-on guidance in planning, prototyping, and problem-solving, fostering practical STEM skills and teamwork among participants
- Collaborated with Dr. Pant, Professor of Aerospace Engineering at IIT Bombay, as part of his mentorship team

### **IngeniX (IngeniX is the STEM Society at HIXS)**

2024 – Present

- President, IngeniX, leading 90+ members across grades 9–12
- Organized three STEM competitions, leading teams to win national and international awards
- Increased outreach through expert sessions, communication and research initiatives

### **Entropy (Entropy is the STEM CAS Club at HIXS), HIXS, India**

2024 – Present

- Leader of the STEM CAS Club at HIXS, guiding 15 members across grades 9–12
- Familiarized STEM concepts through hands-on experiments to inspire interest and engagement in STEM

### **Judge, STEMplify, India ( <https://www.stemplify.com/stem-racing-india/> )**

2025

- Served as a judge for the F1 in Schools Regional and National Finals 2025, evaluating teams on innovation, design, and engineering excellence
- Assessed Design and Engineering Portfolios, providing constructive feedback to support student learning and project improvement
- Contributed to fostering STEM skills, teamwork, and creativity through experience sharing

## **ACADEMIC ENRICHMENT**

### **Harvard University**

2024

Participated in the Harvard Summer School, taking a class called Math and Social Justice under Prof. Matt Cavallo, where we used math to explore issues like climate change, voting rights, and disinformation.

- Applied advanced mathematical concepts, including integration, to real-world social justice and economic issues
- Developed analytical, policy, and presentation skills through rigorous, project-based coursework

### **Plaksha University**

2022

Participated in a two-week residential program focused on real-world engineering and problem-solving. Gained hands-on experience in applying technology to tackle complex, interdisciplinary challenges

- Designed and programmed a cost-effective electrocardiograph using Arduino Uno and electrodes, demonstrating hands-on engineering and prototyping skills

## **LEADERSHIP INITIATIVES**

### **Advocacy Head, CAS (Creativity, Activity, Service) HIXS, India**

2022 – 2024

- Selected from 100 students to serve as a key member of the Student Congress at HIXS, supporting the well-being of 350+ students and coordination with 60 staff members
- Responsible for communication, coordination, and planning, enhancing the quality and impact of CAS projects across the school

## **COMMUNITY OUTREACH**

### **SRF Vidyalaya, Gurugram, India**

2025

SRF Vidyalaya was founded in 2020 by to provide high-quality, affordable education, promoting personal growth and positive community impact

- Organized and conducted 50+ hours of STEM lessons for 6th-grade students, covering scientific concepts such as biology, space, and energy
- Designed engaging, hands-on activities to foster curiosity and foundational understanding of STEM topics
- Science showcase in progress, where students will present their culminating project ideas to inspire the student community and share them with the leadership teams at SRF and HIXS

## **MODEL UNITED NATIONS**

### **Outstanding Delegate, Yale Model United Nations, New Delhi, India**

2024

### **Best Strategist, Model UNESCO, Hong Kong**

2024

## **WRITING AND PUBLICATIONS**

### **Writer, LinkedIn, India ( <https://www.linkedin.com/in/anish-garg-315490249/> )**

2025

- Enhanced outreach by writing on various physics concepts, increasing engagement with the audience
- Explored and engaged on advanced topics, including aerodynamics and F1 wheel design, making complex ideas accessible to readers

### **Researcher, Institute of International Education, India**

2023

Intern Under Mr. Vivek Mansukhani, Program Director

- Researched and wrote two papers on student mobility for education from India: analyzing trends, challenges, and opportunities in international study

## **SPORTS**

2022 – 2024

- Badminton: Member of the High School Badminton Team