

Araadhya Jain

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ACADEMICS

Charterhouse, Surrey

September 2024 - Present

- Grade 11: Physics (B), Chemistry (B), Mathematics (A), Further Mathematics (A)
- Grade 10: Biology (A), Chemistry (A), Physics (A*), World Literature (A*), First Language English (A*), Hindi (B), Geography (A), Business Studies (A), Global Perspectives (A*), International Math (A*)
- Academic Honours: First in Class - International Mathematics (April 2024); Academic Achievement in Physics, English, and Chemistry (April 2024); Bronze Award in UKMT Senior Mathematics Challenge (October 2024), Gold in World Mathematics Invitational (March 2025), Silver Award at HKISO (June 2025)

Standardized Testing

- SAT: 1520 (E: 730; M: 790)

Stanford ULO 'MV Differential Calculus

June 2025 - August 2025

- Attended classes on advanced calculus, vector-valued functions, partial derivatives, and directional derivatives
- Secured a mid-term exam score of 91, and a final exam score of 102, resulting in overall grade A for the course

'Game Theory and Numbers,' University of Michigan Math and Science Scholars

July 2024 - August 2024

- Studied topics such as GDP calculation, and stock market predictions through predictive mathematical models
- Competed in a class-based tournaments applying game theory concepts
- Conducted data analysis on a skiing tournament, developing a function in Excel based on collected data
- Completed key evaluation components, including Nash equilibrium and backward induction

'American Economics,' Georgetown Summer Discovery, Georgetown University

July 2023 - August 2023

- Studied business structures, income sources, and the roles of shareholders, directors, and other stakeholders
- Explored stock market theory, investment strategies, portfolio diversification, and market types in global and national contexts, secured an A grade
- Developed a mock investment portfolio to apply financial concepts in a real-world setting
- Created a detailed business proposal, including asset allocation, marketing strategies, and competitor research

'Writing your College Applications,' Georgetown Summer Discovery, Georgetown University

July 2023 - August 2023

- Developed and refined college application essays through brainstorming sessions and structured writing exercises
- Practiced creative writing techniques, including linking disparate concepts and crafting compelling openings
- Engaged in peer-review sessions, providing and incorporating constructive feedback to strengthen writing
- Studied formal literary devices and structural techniques to enhance clarity and impact in writing
- Evaluated through writing assignments and the incorporation of instructor feedback

'Business, Innovation and Entrepreneurship,' Oxford Royale, Oxford University

July 2022 - August 2022

- Studied key business concepts, including market analysis, business environments, and internal vs. external factors
- Conducted comparative analysis of business leaders such as James Dyson, Simon Cowell, and Philip Green
- Engaged in independent coursework on design thinking, product labeling, and marketing strategies
- Developed and pitched a comprehensive business report for a wearable passport concept as a final project
- Earned a B grade for coursework and final project

Author, Perforated Heat Sinks Research Paper

March 2025

- Developed passive cooling solutions for application in sustainable thermal management systems under the mentorship of Mr. Hitendra Vaishnav; Cleared ST. Yau Fair First Round in September 2025

Author, HAZARDS IN NAIL SALONS Research Paper

September 2023 - Present

- Authored a research paper titled "Hazards towards nail technicians", inspired by firsthand observations of hazardous chemical exposure in nail salons
- Conducted a literature review, analyzing safety reports and papers, including *Hazardous Substance Factsheets*, New Jersey Department of Health and *Work-Related Symptoms in Nail Salon Technicians*, Harris-Roberts
- Conducted an experiment to measure chemical concentrations in a controlled environment, testing the efficacy of diverse ventilation configurations, taking notes on their effectiveness and limitations across diverse contexts
- Will partner with CH NAIL SALON to implement research-driven ventilation for improved workplace safety

LEADERSHIP & SERVICE

Founder, Joining Hands Joining Hope ([LINK](#))

January 2024 - Present

- Founded a STEM-based skilling opportunity for women from underserved communities, focusing on the development of employable skills such as welding, ensuring onward employment opportunities in the cryogenics industry
- Partnered with Inox CVA's Project SPARK and conducted the Iron Woman Skilling Program, teaching women with little to no formal education the intricacies of welding, along with other employable STEM skills to aid poverty alleviation

- Furnished program graduates with certifications qualifying them to conduct welding work across domains
- Conducting a fundraiser to contribute to the stipends received by women enrolled in the Iron Woman Skilling Program
- Authoring the JHJH Ambassador Guide which provides readers with information on the current climate of women in STEM globally and nationally, on the Iron Woman Skilling Program, and future prospects therein
- Conducting regular sessions with women enrolled in the program using the guide to facilitate greater reach

Co-Founder, Chokoreto

November 2021 - Present

- Co-founded *Chokoreto*, a vegan, preservative-free cookie dough business, as part of the Young Entrepreneurs Academy
- Won the *Young Entrepreneurs Academy* competition with Chokoreto and continued the business past the competition
- Developed and expanded the product line to include flavour diversity such as double chocolate chip, rocky road, white chocolate macadamia, and chocolate orange
- Introduced *The Healthy*, a sugar-free, gluten-free, and preservative-free cookie catering to dietary restrictions
- Further diversified offerings to include pre-baked cookie tins for customers without access to baking equipment
- Oversaw business operations, dedicating daily hours to launching the venture and later managing ongoing operations
- Partnered with *PVR Inox* to distribute products pan-India, donating proceeds to *Ekalyuva - Friends of Tribal Societies* to support their skill-building programs based in rural and tribal Indian communities

EXTRACURRICULAR ACTIVITIES

Intern, ITER Organization

July 2025 - August 2025

- Interned at the International Thermonuclear Experimental Reactor project in Cadarache, France
- Examined scientific and technical feasibility of fusion power as a large-scale, carbon-free alternative to fossil fuel generated power, and authored a report on nuclear energy

Practitioner, Speech and Drama

August 2015 - Present

- Attended weekly classes focusing on text memorization, annotation, voice modulation, body language, and proxemics
- Engaged in group-based improv exercises, including speech writing, short skits, and descriptive storytelling
- Delivered prepared pieces with iterative feedback on delivery and technical refinement
- Successfully completed Trinity College London Speech and Drama Grades 1 to 6, receiving merits and distinctions

Intern, INOX India

December 2024 - January 2025

- Learned about the role of LNG fuel tanks as part of the World's Leading Cryogenic Equipment Manufacturing Company under the tutelage of Mr. Nitin Jansari

Member, Charterhouse STEM Society

September 2024 - Present

- Conducted hands-on experiments, including creating terrariums, chromatography testing, and building devices to measure acceleration at varying angles
- Used telescopes to identify celestial bodies, learning to calibrate and adjust them for accurate observations
- Developed STEM skills such as soldering, DNA Chromatography, and precision instrumentation

Member, Charterhouse Physics Society

September 2024 - Present

- Ideated, developed and contributed to the team's strategy for the *Wietzmann Safe Cracking Competition*
- Researched and incorporated physics concepts such as resonance, back EMF, and reliability factors in our strategy
- Worked closely with mentor Adam Steinberg to develop and refine competition proposals, covering key topics such as resonance, success indicators, and the three R's (Reliability, Reversibility, Resetability)
- Used resonance and back EMF to break a fuse, then modified the approach to include a polarising filter and additional concepts such as Sound waves, TIR and Refraction of light based on feedback from competition mentor

Practitioner, Kathak

June 2014 - Present

- Learned the 14 basic exercises (*todhas* and *tukdas*) and four types of footwork (*tatkal*)
- Studied Kathak mudras, theory of taals, and techniques such as *chakars* (turns) and writing *todhas*, *tukdas*, and *taals*
- Prepared for Kathak exams involving both practical performance and written theory, including naming luminary composers, answering theory questions on their work, and writing out diverse aspects of the performance
- Awarded First Place in Praveshika Poorna Exam by Akhil Bharitiya Gandharva Mahavidyalaya Mandal, Mumbai

Participant, Young Entrepreneurs Academy

August 2021 - January 2022

- Worked in teams to develop original business ideas, create business plans, and identify target markets
- Co-founded *Chokoreto*, a cookie dough business, addressing market gaps through in-depth research and analysis
- Presented business plan and sales data to a panel of judges, securing first place and seed funding of ₹40,000 INR

SKILLS

Languages: English (Native), Hindi (Native), Gujarati (Native)

Computer: Microsoft Office, Mac OS