

Pratham Aggarwal

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Education

Sidhhartha Public School

2022-2024 (Anticipated)

Secured 97.5% in School Examination, CBSE Class 12 mid term.

Birla International School

2015-2022

Secured 93% in Indian School Certificate Examination, CBSE Class 10.

Standardized Test Scores

- AP Physics C: Electricity and Magnetism - 5
- AP Calculus BC - 4
- AP Calculus AB Subscore - 4
- TOEFL - 105 (Reading - 24, Listening - 26, Speaking - 28, Writing - 27)
- SAT - 1480 (Math - 800, Reading and writing- 680)

Additional Courses

- Beaver Works Summer Institute (BWSI), MIT, Build A Cube Sat *February 2023*
- BWSI Quantum Software Development *March 2023*
- BWSI Version Control: Git & Github *April 2023*
- BWSI Python Core *May 2023*
- Google ML Course with TensorFlow APIs *October 2022*
- Space Explorer Program, NASO Educational Society & Akashmithra Astronomy *February 2021*
- Amity University Summer School in Space Science and technology *August 2020*
- Advanced course on Python, AI, ML & Robotics from Robo Smart Labs *August 2019*
- Robotics Workshop, IIT Bombay *September 2018*

Awards & Honours

Inspire Award, MANAK

2020

- Designed a prototype based on "Emotional Wing," an air vehicle.
- Received Inspire Award Million Minds Augmenting National Aspirations and Knowledge (MANAK) executed by the Department of Science Technology (DST), Government of India with the National Innovation Foundation - India (NIF).

Silver Honor, International Astronomy and Astro-physics Competition

2023

- Placed among top 20% of 4500 participants.

Pre-Finalist, International Youth Math Challenge

2023

- Special honor for using LATEX to submit solutions.
- Finals in progress

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Bronze Medal, National Karate Championship

2018

- Bronze Medal at the National Karate Championship organized by Japan karate-do Nobukawa-ha Shito-ryu Kai India.
- Recognized by the Karate Association of India (KAI) and approved by the Government of India (Ministry of Youth Affairs and Sports).

Member Zee TV, National Television

2015

- Performed and reached top 100 in National Dance Competition , Dance India Dance.

Research & Internships

Research Scholar

March 2023 - June 2023

Lumiere Research Program

- Investigated the heavy seed and light seed models for the formation and growth of supermassive black holes.
- Utilized a multidisciplinary approach, including developing theoretical frameworks, conducting computational simulations, and analyzing observational data.
- Collaborated closely with Mr. Matthew Scoggins, PhD candidate in Astrophysics, Columbia University, New York.
- Uncovered insights into the mechanisms responsible for the initial formation and subsequent evolution of supermassive black holes.
- Presented my research in Lumiere Symposium
- Independently worked with research mentor for another 12 weeks to research more on super massive black holes.
- Research is submitted for publication review in The Columbia Junior Science Journal

Research Intern

2022

Woxen University

Remote

- Collected, cleaned, and performed statistical analyses on data to train AI models.
- Beta tested models, reviewed code, and trained various AI models under the guidance of Professor Dr. Hemachandran K, Chair Professor of Business Analytics and Machine Learning, Woxen University.
- Developed skills in data preparation, statistical analysis, problem-solving, collaboration, and ensuring code quality.

Work Experience

Machine Learning, Arduino, Raspberry pi Teaching Assistant

2022 – Present

Sidhhartha Public School

- Led Machine Learning programs at Robo Smart Labs, Jaipur, AICRA Awardee for exceptional AI research lab setup.
- Guided and motivated 30 students, improving their performance by 10%.
- Streamlined group projects by delegating tasks, resulting in effective collaborations and successful project outcomes.
- Ensured lab equipment functionality through rigorous testing and maintenance.

Leadership Experience

School Head Boy

2023 – Present

Sidhhartha Public School

- Elected by 1000+ students for school's primary leadership post following a rigorous campaign & election process.
- Organized and coordinated important schoolwide events like teachers' day, sports day, etc.
- Led the entire student council, distributed work among the council members, and monitored their progress.
- Recruited new members and terminated those members who were not obeying their roles

Founder & President, Ramanujan's Equation Emissaries Math Club

2022-2024

Sidhhartha Public School

- Organized webinars focusing on pure math puzzles, fostering interest and discussion among club members.
- Published math content in school magazines to demonstrate its real-world applications and relevance.
- Successfully integrated mathematics with comics, broadening the club's appeal and promoting mathematical concepts to a wider audience.

School House Captain

2021 – 2022

Birla International School

- Encouraged my housemates to participate in sports activities and urged them to strive for excellence in all areas through motivational speeches.
- Identified skilled students for different events and selected them accordingly for optimal house results.
- Assisted the house teachers in successfully organizing various schoolwide events.

Member Library Council

2017 – 2018

Birla International School

- Worked together with other council members to organize and improve library activities.
- Helped create the annual school magazine by collecting and editing student contributions.
- Invited students to submit their work for the magazine and made sure it was carefully checked for quality.
- Helped maintain and update the library pin board, displaying important announcements, book recommendations, and educational resources.

Member, Editorial Board

2016 – 2017

Birla International School

- Collaborated with other team members to collate, edit, and produce the annual school magazine.
- Solicited & rigorously edited submissions from the student body.
- Personally wrote and collected poems and stories for inclusion in the school magazine.

Community Engagement

Environmental Initiative

2019 -20, 2021-23

- Orchestrated robust social campaign in neighboring areas, combatting plastic pollution.
- Created compelling awareness posters and visuals highlighting detrimental impact of plastic bags on environment.
- Distributed 1000 durable, lightweight newspaper bags as eco-conscious alternatives.
- Engaged community, businesses, residents through impactful awareness sessions and informative posters.
- Persuaded behavioral change, promoting widespread adoption of newspaper bags as sustainable solution.

Substance Abuse Campaigner & Camp Director, The Indian Red Cross Society Haryana State Branch.

2023

- Self-Defence & Mindfulness Workshop to combat Substance Abuse
- Advocated for karate and meditation as effective tools to combat substance abuse, educating participants on their physical and mental benefits.
- Successfully managed awareness camps, impacting 225 out of 300 participants. Coordinated a team of volunteers and experts.
- Collected and analyzed participant feedback to enhance the camp's effectiveness continually.
- Led rallies with banners to raise awareness about substance abuse, collaborating with local organizations and schools. Actively advocated for substance abuse prevention policies.

Robotics Education , Awareness & Outreach Coordinator

2022

- Partnered with Rotary Club Rewari Main (RI DIST. 3011 CLUB30759), along with STEM-focused Prime Career Institute.
- Introduced Robotics and Machine Learning programs to local schools, promoting STEM education in the community.
- Extended the potential of Robotics and Machine learning to over 7 villages, impacting the lives of 300+ students across 8 different batches.
- Received recognition and honor from collaborating partners for the successful execution of educational initiatives in the area.

Fundraiser for Temple

Present

- Donating 1100 INR every month from pocket money of 2000 INR.
- For development of temple and for helping temple community to organize langars.