

# Anvesha Saraf

[sarafanvesha@gmail.com](mailto:sarafanvesha@gmail.com) | +91 9830975539

## EDUCATION

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### Modern High School International

July 2022 - Present

- Vice President of the STEAM Club of Modern High School
- Treasurer of the Math Honor Society of Modern High School International
- Core Committee Member for Modern High School International's interschool fest: ShowCASE
- Member of the Connect Club (social service club), Skylab Society of Modern High School
- Member of the Yearbook Design Team of Modern High School International

### Sushila Birla Girls' School

August 2010 - May 2022

- 97.2%: 10th CBSE Board Examinations
- National Topper for 10th grade CBSE Board Science Examination (100%)
- One of only 2 students to have received the honor of getting the scholar badge each year from grade 6 to 10 in a batch of ~120 people
- Junior house representative of the Chalukyas House of Sushila Birla Girls' School
- Junior prefect of Sushila Birla Girls' School
- Value ambassador of Sushila Birla Girls' School

## RESEARCH PROJECTS

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### Data Privacy in Modern Data Science

*Professor: Dr. Wanron Zhang, Organisation: Harvard University*

Conducting research on navigating the trade-off between data privacy and utility in the landscape of differential privacy via medical records data. This study also explores the ethical and legal landscape of this issue, delving into the analysis of real-world use cases to make policy suggestions with regard to this field.

### Technical Report on Cobots

*Independent Research*

The technical report conducts a multi-faceted analysis of the use of collaborative robots (cobots). It delves into technical aspects such as its working principles and key features, along with outlining its benefits and challenges. The study examines their use in real-life contexts and further discusses ethical considerations and future prospects.

## WORK EXPERIENCE

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### Research Internship: The Living Waters of Kolkata

January - September 2023

- Investigated and examined the current dyeing and laundry procedures in the Dhobighats of Kolkata, the root problems in it and a potential way forward
- Curated a visual study on the research for a virtual exhibition put up by the organization

### Internship: Lee and Nee Softwares (Exports)

May - July 2023

- Designed and collaborated on the company's projects: image annotation based web tool, web scraping application, real estate construction sale website
- Investigated the ethical use of AI in the workplace, specifically for software developers and in the provision of digital solutions

### Internship: BuildAll Technologies

September - December 2022

- Conducted qualitative research about the AI based layers that can be put into the organization's line of container architecture. This research was conducted through analysis of a wide array of real

world use cases and understanding consumer demands to introduce AI-based layers in different types of container architecture

- Conducted research on the key trends and drivers in the industrial cybersecurity market in India. The study also assessed market opportunity and challenges, analyzed the competitive landscape of the market and developed recommendations for businesses operating in the market
- Curated a digital marketing strategy for the company's social media

#### **Internship: The Random Vibez Website**

**November 2019 - April 2022**

- Collaborated as a content curator and webmaster for the organization's website
- Developed a social media strategy for the organization's handles on Pinterest, Facebook, and made their page reach 4 million+ followers on Pinterest

#### **Internship: Omkar Infracon Private Limited**

**January 2020 - July 2022**

- Spearheaded post-solar panel installation environmental impact assessment, calculating carbon footprint of production
- Facilitated with the installation of an automated Ready-Mix Concrete (RMC) plant, collaborating with the Research & Development team

#### **CERTIFICATIONS**

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- Introduction to Mathematical Thinking - Stanford, Professor: Keith Devlin: 93.56 %
- Data Science: Machine Learning- HarvardX, Professor: Rafael Irizarry
- Calculus Applied!: HarvardX
- AI in Healthcare Specialization: Stanford: 100%
- LinkedIn certification: Passed LinkedIn Skill Assessments in Python, Android, Microsoft Powerpoint, Microsoft Word, HTML
- International Taekwon-Do Federation: Certified dan black belt 1
- White Hat Jr.: UI & UX Design Applications in Gaming

#### **TECHNICAL SKILLS**

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- Java • Python (with AI) • EV3 Robotics • HTML • Arduino • R • QBasic • Graphic Designing
- App Making (MIT App Inventor)

#### **COMMUNITY SERVICE**

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##### **Founder, President: Sheable Foundation**

September 2020 - Present

- Founded 80-G registered Sheable Foundation working toward spreading menstrual hygiene awareness, tackling period poverty and spreading STEM education amongst girls
- Distributed 2,25,000+ sanitary napkins, impacted 12,000+ menstruators with a team of 46 volunteers, raising \$18,000+
- Set up an automatic sanitary napkin manufacturing unit in Pancharul, West Bengal
  - employs 10 women
  - produces ~2,00,000 sanitary napkins a month, with a potential of serving nearly 25,000 menstruators in Pancharul and nearby villages
  - pilot project to be expanded pan-India in collaboration with the CSR partner: Kaydee Foundation

## **VOLUNTEERING**

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- Volunteer, Ektara Learning Center - taught students from grades 2 - 11 Science, Social Science, English and Math
- Social Media Head, Fieldwork Volunteer: To Environment, With Love: graphic designer and content curator for ~ 18 months
- Ideated lesson plans for Modern High School for Girls' Wednesday Activity: The Brain Gym: STEM Lab; connected STEM concepts to fun hands-on-learning experiments to help spark an interest in STEM through practical engagement.
- Introductory Team, citywide TENSAI outreach programme team of the STEAM club: created an open research community and built the foundations of research & translational science amongst students both within and outside the school starting from middle school

## **AWARDS**

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- *Programming Lead: Team India: Rank 5 amongst 193 countries: First Global Challenge 2020*

Represented India in the Olympics-styled robotics competition, First Global Challenge: Solved several weekly challenges across three months, integrating technology with social issues and using robotics to redesign everyday objects to increase functionality. Created and set up automatic sanitizer dispensers during the COVID-19 pandemic in public areas. Ranked 1st globally in two technical challenges - Shoe Mess Terminator and Taser Ring.

- *Team Captain for the Indian nationals of the First Lego League 2020*

Attempted to resolve the traffic issue in metropolitan cities by creating a multilevel automated smart parking system with a smart zone for hawkers (creating solutions specific to problems in Kolkata as well) and an app for civilians, along with creating drive over ambulances for emergencies.

- *Placed 2nd in the Indian Nationals of World Robot Olympiad 2017 - Open Category*

Worked on an automated natural dyeing prototype to make natural dyeing scaleable as a sustainable alternative to chemical dyeing by -

i) reducing the need to re-dye, thereby saving water ii) increasing the chances of getting the exact shade by using a color sensor iii) providing an efficient and standardized method for mass production with natural dyeing iv) using fruit peels and other waste materials from natural sources to optimise their use

- *Certificate of Academic Excellence in recognition of enthusiasm and high level of attainment demonstrated in Hindi SL, Economics HL, Physics SL, Computer Science HL and Mathematics AA HL in the academic year 2022 - 23.*

## ACADEMIC TRACK RECORD

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### **Sushila Birla Girls' School**

#### **Grades 1 - 8**

- General Proficiency 1 (Rank 1): Grades I, III, IV, V, VI
- General Proficiency 2 (Rank 2): Grades II, VII, VIII
- Percentage  $\geq 90\%$  across all years

#### **Grade 9: 2020 – 2021 (Rank not Declared)**

Science	98.08%	English	84.46%
Social Science	93.46%	Hindi	83.46%
Mathematics	89.23%	Total	~90%

#### **Grade 10: 2021 - 22 (Rank not Declared)**

Science	100%	English	97%
Social Science	98%	Hindi	97%
Mathematics	94%	Total	97.2%

Prizes Awarded: Subject prize for internal school assessments in Science, Mathematics  
Featured in the Telegraph for a perfect score in the CBSE Board Science Examination.

### **Modern High School International**

#### **Grade 11: 2022 – 2023**

Term 1 End of Term Examinations -

Math AA	7/7	Physics	7/7
Computer Science	7/7	Hindi	6/7
Economics	7/7	English	4/7
<b>Total: 38/42</b>			

Term 2 End of Term Examinations -

Math AA	7/7	Physics	7/7
Computer Science	7/7	Hindi	7/7
Economics	7/7	English	6/7
<b>Total: 41/42</b>			

### **Standardized Testing**

**SAT:** 1520/1600 (730/800: English Reading & Writing, 790/800: Math)

**IELTS:** 8.5/9