

Rubai Mushtaq

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Introduction

Currently in my first year at Ashoka University, I am planning to major in Biology with a minor in Mathematics. Fascinated by the cellular and molecular mechanisms that control the human body and mind, I hope to pursue a future in medical research. I also plan to explore Computer Science and History during my time as an undergraduate.

Simultaneously, I plan to foster a change in the STEM high school culture in India, shifting the focus from isolated teaching, memorization and entrance exam preparation, to the use of the scientific method in class, critical thinking and interdisciplinary learning.

Education

Vidya Valley School

June 2012 - May 2022

Board: Council for the Indian School Certificate Examinations

Final Score (Grade 10, ICSE): 98.2%

DriveChange Learning & Resource Centre (DLRC)

May 2022 - March 2024

Board: Cambridge International AS and A Levels.

A Levels Final Grades:

- Mathematics: A*
- Physics: A*
- Chemistry: A*
- Biology: A*
- General English (AS Level): B

Clubs and Activities

Ashoka University

August 2024 - May 2028

Major: Biology

Minor: Mathematics

SAT Score

August 2023

- **Math:** 800
 - **Reading and Writing:** 770
 - **Combined Score:** 1570
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Student Government

June 2021 - May 2022, Vidya Valley School

I was elected as the Head Girl of my school in 10th grade. As the Head of the Office Bearers, I lead the Vidya Valley School Student Council.

I learnt what it truly meant to be a leader – someone who didn't simply take on all the work themselves, but encouraged and brought out the best in others. I hope that I've influenced other girls to take up leadership roles.

The Biology Society at Ashoka University

August 2024 - Present

I was selected to join the The Biology Society at Ashoka University. As an active member, I contributed to and participated in several key initiatives. Notable among these were the BioSoc Stall at "Run For A Cause," an event organized by IEEE to raise funds for science kits for high school students in Asawarpur, and an engaging "Intro to Python" workshop.

Currently, I am one of the two organizers for our upcoming flagship events: The ASP AMA (Ashoka Scholars' Program Ask Me Anything) and the Bio Mixer.

Internships

Teaching Assistant

DriveChange Learning & Resource Centre (DLRC)

August 2022 - March 2024

I tutored juniors struggling in math and chemistry. I took chemistry lessons for ninth and eleventh-graders. I conducted several practical sessions for eleventh-graders, and designed and corrected tests. (IGCSE, AS & A Level Syllabus)

I worked with one student for two years. I taught her math and chemistry, she taught me what it meant to be a good teacher. This experience helped me uncover and nurture my love for teaching. I will continue to teach alongside my studies and my career.

Lab Assistant

Symbiosis Centre For Waste Resource Management,
Symbiosis International (Deemed University)
April 2023

I spent three weeks in a microbiology lab learning how to isolate and culture bacterial colonies. The colonies were from a leachate sample extracted from a landfill. The colonies would later go on to be screened for useful enzymes.

Exposed to the different aspects of research and experimentation, I got a glimpse of the other side of science: lab work. Using my theoretical knowledge in my practical work, I understood the importance of developing intuition, technique and patience.

Data Entry

ElixirAI
April 2024 - June 2024

During my internship with ElixirAI, I contributed to a project aimed at digitizing paper-based surgery reports from Jehangir Hospital. My responsibilities included reviewing physical records and inputting their data into a spreadsheet. I collaborated closely with the team to verify data accuracy and resolve discrepancies. This experience allowed me to develop a deeper understanding of data digitization, and it gave me valuable insights into the intersection of healthcare and technology.

NIUS Project

IISER Pune
June 2025 - August 2025

Out of around 40 participants at NIUS's Biology Camp, approximately 10 of us were selected to pursue research projects under the mentorship of esteemed scientists.

I have been assigned to Dr. Kundan Sengupta, who is the Principle Investigator at the Chromosome Biology Lab (CBL) at IISER Pune. I will begin working there this summer.

Portfolio

Online Course: The Addicted Brain
Coursera

December 2022 - February 2023

I completed an online course offered by Emory University on Coursera titled The Addicted Brain. I learnt about various drugs and their functional mechanisms, as well as substance abuse as a social issue.

It was thanks to this course that I developed an interest in biochemistry, neurosciences and pharmacology. Inspired by the course content, it is my goal to pursue a career in medical research.

NIUS Biology Camp

Homi Bhabha Centre for Science Education, TIFR

November 2024

I was selected to attend the Biology Camp organized by the National Initiative of Undergraduate Science in Mumbai. During the camp, we had the opportunity to conduct various experiments in the lab. Later, we were divided into groups, assigned specific inquiries, and tasked with exploring them through experimentation and literature reviews.

This experience allowed me to meet aspiring biologists from across the country and independently conduct multiple experiments, significantly enhancing my skills and knowledge.

Awards

Wg Cdr Suhas Clement Solomon Award for Extraordinary Achievement

December 2019, Vidya Valley School

Every year, this award is given by Vidya Valley School to one student for an all round extraordinary performance. The trophy bears the inscription: "To always aim for the stars with grit, determination and, above all, with a sense of humour."

I am the first girl in the school's history to have received this prestigious award. Becoming a role model for young girls means a lot to me.

Head Girl

June 2021 - May 2022, Vidya Valley School

National Silver Medal, Taekwondo

August 2019, Gujarat, India

Black Belt, Taekwondo

April 2019, Fighters Taekwondo Academy