

**BHUMIKA MITTAL**

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9772210714

**EDUCATION**

B.Sc in Computer Science, Minor in Mathematics	Ashoka University		2024	3.86/4 CGPA
CLASS XII in SCIENCE	Maheshwari Girls Public School	CBSE	2020	95.4 %
CLASS X	Maheshwari Girls Public School	CBSE	2018	95.33 %
<b>Subjects / Electives</b>	Software Debugging, Data Structures, Algorithm Design and Analysis, Computer Organization and Systems, Operating Systems, Introduction to Machine Learning, Linear Algebra, Probability and Statistics, Artificial Intelligence and Data Analytics			
<b>Technical Proficiency</b>	Java, Python3, SQL, Data Visualization, C Programming, LaTeX, Git			

**WORK EXPERIENCE**

<b>ASHOKA UNIVERSITY   Teaching Assistant - Discrete Mathematics</b>	<b>Jan 2023 - Present</b>
-Assisting Professor Partha Pratim Das in teaching and organising lectures for a class of over 50+ students. -Conducting weekly office hours and handling assignment grading.	
<b>ASHOKA UNIVERSITY   Teaching Assistant - Introduction to Computer Programming</b>	<b>Aug 2022 - Jan 2023</b>
-Assisting Professor Goutam Paul in teaching and organising lectures for a class of over 50+ students. -Conducting weekly office hours and handling assignment grading.	
<b>BAKER INSTITUTE FOR ENTREPRENEURSHIP AT LEHIGH UNIVERSITY   Innovator</b>	<b>May 2022 - Jul 2022</b>
- Global Good Fund: Measuring the financial outcomes of venture investing is well established with clear and identifiable metrics and the ability to track those specific metrics over time.	
<b>YOUNG SCHOLARS PROGRAMME (YSP)   Office Counselor</b>	<b>May 2022 - May 2022</b>
Worked on setting up the infrastructure for the program to easily navigate 250+ high school students through different platforms used for the program.	
<b>ZAAN WEBVEDA PVT LTD   Tech and Product Manager</b>	<b>Feb 2021 - Apr 2022</b>
Ideated and built the WebVeda platform for the courses which hosts 100k learners and helped in generating the revenue of \$1Mn within 10 months, working on a Mobile App for the same. Managing all the tech aspects of the brand ranging from the website, the course, email service, and payment gateway along with developing different platforms and products for the brand.	
<b>PROMYS - BOSTON UNIVERSITY   Student and Mehta Fellow</b>	<b>Jul 2020 - Aug 2021</b>
Participated as the Returning Student, Research paper on De-Brujin Sequences, completed the course on Number Theory, and attended various Guests Lectures and Mini-courses.	

**PROJECTS**

<b>Fibonacci Numbers - Mathematics</b>	<b>Jul 2020 - Jul 2022</b>
In this project, we investigated the various properties of Fibonacci numbers and sequences similar to Fibonacci, their sum identities, relation with Golden Ratio, Pascal's Triangle and their Combinatorial Interpretation. We also introduced conjectures related to the periodicity of Fibonacci numbers mod m and divisibility of Fibonacci numbers along with developing a JAVA Program to calculate the first zero and the period of Fibonacci sequence mod m. Link - <a href="https://drive.google.com/file/d/1dnjESVGu8RWYcjuA9FZdR9zbCIKxYsVvK/view?usp=drivesdk">https://drive.google.com/file/d/1dnjESVGu8RWYcjuA9FZdR9zbCIKxYsVvK/view?usp=drivesdk</a>	

**POSITIONS HELD**

<b>Core Team   CS Society</b>	<b>Aug 2022 - Present</b>
<b>Vice-Captain   Maheshwari Girls Public School</b>	<b>Apr 2018 - Apr 2019</b>
Represented over 1500 students	
<b>President   Interact Club, Rotary</b>	<b>Apr 2018 - Aug 2019</b>
<b>Vice President   Cyber Club</b>	<b>Apr 2017 - Jul 2018</b>

**AWARDS AND ACCOMPLISHMENTS**

<b>Dean's List   Ashoka University</b>	<b>2022</b>
Monsoon 2022, Spring 2022, Monsoon 2021	
<b>Most Powerful and Serene Award   Maheshwari Girls Public School</b>	<b>2019</b>
Awarded the Best Student Award (1 of 1800 students chosen) for "positive impact on school culture" and engagement in academics, co-curricular, social services, and general conduct in the Senior Category along with the cash prize	
<b>First Prize - National Ideationology Challenge 2019   Rajasthan Technical University, RIET, Intellecta Inc. USA, TEQIP</b>	<b>2019</b>
Won the first prize at National Ideationology Challenge 2019 along with the cash prize for the project UPDEED. Also, received a contract with equity ownership from Intellecta Inc., USA. Was the only high school participant competing against various college students and start-ups.	
<b>Best in IT Award   Maheshwari Girls Public School</b>	<b>2018</b>
Awarded Best in IT Award in the School Annual Function for the work and contribution in IT department.	
<b>Budding Leader Award   Maheshwari Girls Public School</b>	<b>2018</b>
Honoured with Budding Leader of the School Award for the Leadership Skills as the Vice Captain of Saraswati House.	
<b>School Topper - National Cyber Olympiad   Science Olympiad Foundation &amp; Kshitij, IIT Kharagpur</b>	<b>2018</b>

**PUBLICATIONS**

<b>On the Existence of Balanced Generalized de Bruijn Sequences   Journal name: arxiv   Publication date: Jan 28, 2022</b>
A balanced generalized de Bruijn sequence with parameters $(n, l, k)$ is a cyclic sequence of $n$ bits such that (a) the number of 0's equals the number of 1's, and (b) each substring of length $l$ occurs at most $k$ times. We determine necessary and sufficient conditions on $n, l$ , and $k$ for the existence of such a sequence.

**VOLUNTEER EXPERIENCE**

<b>The ASEAN Youth Journal - Role: Head of Tech Team   Cause: Social Services   Nov 2020 - Mar 2021</b>
Head of Tech Team at The ASEAN Youth Journal - Maintained and developed AYJ website ( <a href="http://journal.ayose.org">journal.ayose.org</a> ), coordinated ASEAN Youth Organisation events, published articles and blogs, managed its social media platforms, and moderated online meetings, webinars, and workshops, conducted weekly meetings with the team.
Technical Director (AYO) - Managing the AYO webinar series (Entrepreneur Basics Series) <a href="https://aseanyouth.net/2020/12/15/entrepreneur-basics-series/">https://aseanyouth.net/2020/12/15/entrepreneur-basics-series/</a>