

# AARATRICK BASU

## RÉSUMÉ

### PERSONAL DATA

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DATE OF BIRTH 5<sup>th</sup> August, 2003  
E-MAIL [aarattrick.r2ab@gmail.com](mailto:aarattrick.r2ab@gmail.com), [ukg7ef@virginia.edu](mailto:ukg7ef@virginia.edu)

### EDUCATION

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PERIOD	2021 — Present	
DEGREE	Bachelor of Mathematics (Honours)	
SCORE	2309/2500 (for first five semesters)	
PERCENTAGE	92.36%	
UNIVERSITY	Indian Statistical Institute	Bangalore, India
PERIOD	2020 — 2021	
DEGREE	Class XII (Higher Secondary School)	
SCORE	578/600	
PERCENTAGE	96.3%	
SCHOOL	Aditya Academy Secondary, Kadambagachi	West Bengal, India
PERIOD	2018 — 2019	
DEGREE	Class X (Secondary School)	
SCORE	482/500	
PERCENTAGE	96.4%	
SCHOOL	Aditya Academy Secondary, Kadambagachi	West Bengal, India

### PROJECTS

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PERIOD	January - April 2024	
ORGANISERS	Prof. Charanya Ravi, Prof. Jishnu Biswas, Prof. Manish Kumar	
PROGRAM	Reading Seminar	ISI Bangalore
TOPIC	Intersection homology	
PERIOD	May - July 2023	
GUIDE	Prof. Subhojoy Gupta	IISc Bangalore
PROGRAM	Summer Research Fellowship Program	
TOPIC	Geometry and Topology of Surfaces	
PERIOD	June - July 2023	
ORGANISER	Prof. Apoorva Khare, Prof. R Venkatesh	IISc Bangalore
PROGRAM	Advanced Instruction School	
TOPIC	Lie Groups and Lie Algebras	
PERIOD	December 2022	
GUIDE	Prof. Maneesh Thakur	ISI Bangalore
TOPIC	Geometric Algebra	

## SCHOLARSHIPS AND AWARDS

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<b>2022</b>	Summer Research Fellowship (Indian Academy of Sciences)
<b>2019</b>	KVPY SA Fellow
<b>2019</b>	JBNSTS Junior Scholar

## SKILLS

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<b>Languages</b>	English (near native), Hindi (fluent), Bengali (native)
<b>Programming Languages</b>	Python, LaTeX, R, Markdown, JavaScript, Bash

## TALKS GIVEN

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- A proof of the Dehn-Nielsen-Baer theorem using geometric group theory  
Presentation at end of project with Prof. Subhojoy Gupta, IISc Bangalore, July 2023
- Hyperbolic Geometry, Hyperbolic Surfaces and Fuchsian Groups  
Math Club student talk, ISI Bangalore, August 2023
- $L^2$ -cohomology and intersection cohomology  
Intersection Homology reading seminar, ISI Bangalore, February 2024
- What is  $\pi_1(x)$ ?  
Math Club “What is ...?” seminar, ISI Bangalore, March 2024
- The Riemann-Hurwitz formula, orbifolds and Hurwitz’s automorphism theorem  
Part of Complex Analysis course, ISI Bangalore, March 2024

## VOLUNTEER WORK

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- Involved in organising talks and maintaining the [website](#) of student run *Math Club* at ISI Bangalore.
- Contributed to the [website](#) of math contest *LIMIT* run by students of ISI Bangalore.
- LaTeXed notes of course on Real Analysis of Several Variables, available [here](#).
- Planned and organised “What is ...?” [seminar](#) with other Math Club members at ISI Bangalore.