

# AARYAN C. SUKHADIA

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## EDUCATION

### Stanford University

2021 – 2025

Major in Mathematics w/ Honors (Ongoing)

GPA: 3.85 (Cumulative)

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## RESEARCH

### Honors Thesis on Number-Theoretic Langlands Correspondence

Ongoing, Supervised by Brian Conrad @ Stanford University

Spring 2024 – Present

Reading a variety of texts to build theory and write expository thesis on connection between automorphic representations of adèle matrix group quotients and number-field extensions.

### REU on Supersingular Diagonal Curves and their Genera

Supervised by Benjamin Church, Spencer Dembner @ Stanford University

Summer 2023

Computed zeta functions and genera of supersingular diagonal curves in weighted projective space, and gave a (previously-unknown) exact characterization of such curves. Developed statistical heuristics to prove new bounds and motivate conjectures on prime-genus question.

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## TEACHING EXPERIENCE

### Grader @ Stanford Math Dept.

Fall 2022 – Present

Math 51 (LinAlg and Multivar Calc), Math 120 (Groups and Rings), Math 216A (Grad Alg Geo).

### SUMO Tutor @ Stanford

Fall 2022 – Present

Lead weekly pset help sessions for introductory calculus and linear algebra classes.

### Head Counselor @ Stanford University Mathematics Camp

Summer 2024

Guided students through Algebraic Topology coursework; Mentored reading project on Metric Spaces and  $p$ -adic Valuations; Led writeup of first-ever solution set for Program II for future counselor use.

### Instructor and Organizer @ Math 75SI, Stanford

Winter 2024

Led second-ever iteration of student-organized undergrad course on *How to Give a Math Talk*; Organized panels, talks, writeups; Worked to codify class in administration for posterity.

### Counselor @ Program in Mathematics for Young Scientists

Summer 2022

Guided students in Number Theory coursework; TA'd for Advanced Course on Kontsevich's Conjecture; Designed camp t-shirt; Mentored research project on Mahler-Popkens complexity.

### Tutor, Freelance

2018 – Present

Tutored a number of students in a variety of subjects, including mathematics, computer science, physics and chemistry. Content level ranged from elementary-school to undergraduate.

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## OTHER WORK EXPERIENCE

### Service DevOps Intern @ Grab Indonesia

Summer 2019

Used AppScript to automate database sanitation and amend algorithms for report and promo code generation to reduce redundancies by over 50% for a ride-share service.

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**OUTREACH  
AND SERVICE****Founder and Managing Editor @ Cardinality***Summer 2024 – Present*

Named, created, edited for and wrote in first-ever issue of Stanford's undergraduate math magazine.

**Board Member @ Stanford Undergrad Math Organization***Fall 2022 - Present*

Coordinated Speaker Series events; Maintained website; Curated academic resources.

**Frosh 101 Leader @ Stanford***Fall 2022*

TA'd two sections of a discussion-led course for freshmen on building college community.

**Peer Reviewer @ National High-School Journal of Science***2019 – 2021*

Reviewed scientific and mathematical research by advanced high-school students.

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**SELECTED  
TALKS***3264 Conics @ Stanford**Oct 2024**How to Give a Math Talk @ SUMaC**July 2024**BB(n) and Goldbach's Conjecture @ Math75SI**Jan 2024**Classification and Genera of Supersingular Diagonal Curves @ SURPS**Aug 2023**Seifert Surfaces @ Math75SI**Feb 2023**"T-Shirt Talk" on Constructible Polygons @ PROMYS**Summer 2022**How to Write Proofs @ PROMYS**Summer 2022*

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**SKILLS****Programming**

Proficient in Python, C/C++, LaTeX; Working Knowledge of Sage, React, JS.

**Languages**

Fluent English; Heritage Hindi; Intermediate Korean; Beginner Mandarin and Spanish