Aaryan C. Sukhadia

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Education

Stanford University

Coterminal Masters in Mathematics (Ongoing) 2025 – 2026
Cumulative GPA: 3.96
Bachelor of Science in Mathematics w/ Honors 2021 – 2025
Cumulative GPA: 3.87

Research

Honors Thesis on Tate's thesis
Supervised by Brian Conrad @ Stanford University *Spring 2024 – Spring 2025*

Wrote expository thesis on idelic zeta functions over global fields, unifying and modernizing existing writeups, especially in positive characteristic.

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 novel exact characterization of such curves. Developed statistical heuristics to prove new bounds and motivate conjectures on prime-genus question.

Teaching Experience

Teaching Assistant @ Stanford Math Department *Fall 2025 – Present*

TA'ing Math 110 (Number Theory for Cryptography), and expected to TA Math 52 (Multivar Integral Calc) and Math 53 (DiffEqs and Fourier Theory) in coming quarters.

Head Counselor @ Stanford University Mathematics Camp *Summer 2025 & 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.

Math Academic Mentor @ Stanford Summer Bridge *Summer 2025*

TA'ed pre-calc course for incoming first-generation/low-income Stanford freshmen.

Grader & Tutor @ Stanford Math Dept. *Fall 2022 – Spring 2025*

Graded Math 51 (LinAlg and Multivar Calc), Math 63DM (Prob. and Information Theory), Math 120 (Groups and Rings), Math 216A (Grad Alg Geo). Lead weekly pset help sessions for introductory calculus and linear algebra classes.

Instructor and Organizer @ Math 75SI, Stanford *Winter 2024*

Ran second-ever iteration of student-organized undergrad course on *How to Give a Math Talk*

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.

Other Work Experience

Service DevOps Intern @ Grab Indonesia *Summer 2019*

Used AppsScript to automate database sanitation and amend algorithms for report and promo code generation to reduce redundancies for a ride-share service.

Outreach and Service

Board Member @ Stanford Undergrad Math Organization *Fall 2022 - 2025*

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 comunity.

Selected Talks

***How to Give a Math Talk* @ SURIM** *July 2025*

***Murphy's Law for Graph Schemes* @ Stanford** *Oct 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*

Misc. Skills

Programming

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

Languages

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