

Atharva Gawde

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Education

2023–2027 University of Michigan – Ann Arbor
Bachelor's in Honors Mathematics and Computer Science; Minor in Physics

2020–2023 Illinois Mathematics and Science Academy
High School Diploma

Coursework

MATHEMATICS

Lie Algebras	Math 538, Fall 2026	Algebraic Topology II	Math 696, Winter 2026
Algebraic Geometry II	Math 632, Winter 2026	Tensor Categories	Math 715, Winter 2026
Algebraic Topology I	Math 695, Fall 2025	Algebraic Geometry I [†]	Math 631, Fall 2025
Graduate Algebra I	Math 593, Fall 2025	Lie Groups	Math 637, Fall 2025
Algebraic Topology [†]	Math 592, Winter 2025	Probability Theory	Math 525, Winter 2025
Honors Analysis II	Math 396, Winter 2025	Intro Combinatorics	Math 465, Fall 2024
Honors Analysis I	Math 395, Fall 2024	Honors Mathematics II	Math 296, Winter 2024
Honors Mathematics I	Math 295, Fall 2023	Elementary Number Theory	High school
Abstract Algebra	High school		

[†]Audited

COMPUTER SCIENCE

Automated Formal Verification	EECS 498, Fall 2026	Operating Systems	EECS 482/408, Winter 2026
Machine Learning	EECS 553, Fall 2025	Computer Organization	EECS 370, Fall 2025
Data Structures & Algorithms	EECS 281, Winter 2025	Foundations of Computer Science	EECS 376, Winter 2025
Programming & Data Structures	EECS 280, Fall 2024		

PHYSICS

Thermodynamics	Physics 360, Fall 2024	Electricity, Magnetism, & Relativity	Physics 260, Winter 2024
Classical Mechanics	Physics 160, Fall 2023		

Learning

- 2026 **Configuration Spaces Summer School**
University of Michigan – Ann Arbor
- Lectures on configuration spaces and braid groups in algebraic topology, homological stability, scanning, fibrations, representation stability, mapping class group actions, Totaro’s spectral sequence, Poincaré duality, rational functions and Manin’s conjecture, and moments of L -functions.
- 2025 **Utrecht Summer School on Geometry**
Universiteit Utrecht
- Lecture topics included quaternion algebras, matrix Lie groups and Lie algebras (exponentials, BCH formula, Lie’s third theorem), the Pontryagin–Thom construction (cobordisms and homotopy groups of spheres), elliptic curves and the congruent number problem, formalization in Lean, mathematical billiards, category theory, and analysis in several complex variables.

Teaching

- Winter 2026 **Course Grader, Math 425: Introduction to Probability**
University of Michigan
- Winter 2026 **Course Assistant/Tutor, Math 592: Algebraic Topology**
University of Michigan

Research Experience

- 2025 **Undergraduate Researcher, PolyMath Jr. Collaborative Research Program**
in the Finding Ellipses Project. Advised by Valentin Kunz, Nathan Wagner, Lars Wagoner, and Yunus Zeytuncu.
- 2021–2023 **Student Researcher, Northwestern University**
in dark matter detection and detector calibration with the Dahl High Energy Physics Group. Advised by Eric Dahl.

Talks and Presentations

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| 2024–2025 | Commutative Algebra towards Algebraic Geometry | Michigan Math DRP |
| 2024–2025 | Abelian Categories and Homological Algebra
Supervised by Barry Henaku | Michigan Math DRP |
| 2024 | Primes of the Form $x^2 + ny^2$ and Quadratic Forms
Supervised by Simran Khunger | Michigan Math DRP |
| 2023 | Acoustic Imaging for SBC Dark Matter Detectors
Supervised by Eric Dahl | IMSAlloquium |
| 2022 | Sb-124 Calibration for SBC Detectors
Supervised by Eric Dahl | IMSAlloquium |

Honors and Awards

- 2023–2026 University Honors, University of Michigan
- 2023–2026 Victors Award Scholarship

2023 National Merit Finalist
2023 National German Exchange Scholar

Languages

English (native), German (fluent), Hindi, Marathi