

ADITHYA BHASKARA

Boulder, CO
[officialadithya.github.io](https://github.com/officialadithya)

References available upon request.

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Google Scholar

EDUCATION

-
- University of Colorado Boulder** Boulder, Colorado
 - Bachelor of Science - Computer Science; Bachelor of Arts - Mathematics* *August, 2022 - (Expected) May, 2026*
 - Major GPA: 4.000, Cumulative GPA: 3.990 (as of Dec. 2024)* [Transcript](#).
 - Relevant Coursework: 7 Graduate Courses: Linear and Integer Programming, Algebra 1, Theory of Computation, Design and Analysis of Algorithms, Advanced Algorithms (In Progress), Algorithmic Economics (In Progress), Advanced Convex Optimization (In Progress)*
 - Complexity Theory (Audit)*

RESEARCH EXPERIENCE

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- University of Colorado Boulder** **Undergraduate Researcher**
Advised by [Rafael Frongillo](#), Ph. D. *May, 2023 - Present*

- Seeking to understand and capture the design spaces of liquidity provisioning and transaction fee protocols in prediction markets and decentralized exchanges.
- Thinking about liquidity provisioning as multiple automated market makers running in parallel and resulting implications.
- Assisted Rafael Frongillo with reviewing two submissions to SODA and Management Science.
- Research interests include topics in theoretical computer science, especially algorithmic economics, computational social choice theory, algorithms, and complexity.
- Active in the algorithmic economics reading group.

- Preprints

- Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygar. A general theory of liquidity provisioning for automated market makers. *arXiv preprint arXiv:2311.08725*, 2023

- Talks

- Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygar. A general theory of liquidity provisioning for automated market makers, 2024. Workshop on Blockchains and Decentralized Finance at the 25th ACM Conference on Economics and Computation (EC'24), [Recording](#).

TEACHING EXPERIENCE

University of Colorado Boulder

- CSCI 3155: Principles of Programming Languages, Spring 2025. Course Assistant.
- CSCI 3104: Algorithms, Spring 2024. Course Assistant.
- MATH 1300: Calculus I, Spring 2023. Learning Assistant.
- \LaTeX ed [course notes](#) while taking MATH 2135: Linear Algebra for Mathematics Majors in Fall 2022.

Silver Creek High School

- Instructional Student Assistant (ISA) Program Director, Fall 2021-Spring 2022. Oversaw 7 ISAs.
- College-Preparatory Physics, Spring, Fall 2021-Spring 2022. Instructional Student Assistant.
- High School Algebra I, Fall 2020. Instructional Student Assistant.
- High School Algebra II, Spring 2020. Instructional Student Assistant.

Innovation Center of St. Vrain Valley Schools

- Advanced Cybersecurity with Python Programming, Summer 2023. (Intensive 7-Hour/Day Weeklong Course). Instructor.
- Fundamentals of Cybersecurity, Summers 2019-2022. (Intensive 7-Hour/Day Weeklong Course). Instructor.

HONORS, AWARDS, AND FUNDING

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- [Boettcher Scholarship](#) (Undergraduate Merit-Based Full Ride) Awardee *April, 2022*
 - [Economics and Computation](#) 2024 Travel Grant, Funded by Rafael Frongillo's NSF CAREER Award *July, 2024*
 - [Algorithmic Economics](#) NSF REU Grant Recipient, Funded by Rafael Frongillo's NSF CAREER Award *May, 2023*
 - Marlene Massaro Pratto and David Pratto Scholarship in Mathematics Awardee *June, 2024*
 - University of Colorado Boulder [Engineering Honors](#) Student *February, 2022*
 - [National Merit Finalist](#) *February, 2022*
 - Horace M. Hale Esteemed Scholarship Awardee *January, 2022*
 - Colorado School of Mines Medal of Achievement in Mathematics and Science Awardee *May, 2021*

SCHOLARLY SERVICE & ADDITIONAL RESEARCH ACTIVITY

- Engineering Honors Program Admissions Executive Committee Member *University of Colorado Boulder, 2024*
- [Norlin Scholarship](#) Admissions Reviewer *University of Colorado Boulder, 2023, 2024*
- Engineering Honors Program First-Year Seminar Recitation Leader *University of Colorado Boulder, 2024*
- Semi-technical blog on topics in mathematics and theoretical computer science at <https://officialadithya.github.io/blog/>

REFERENCES

- [1] Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygar. A general theory of liquidity provisioning for automated market makers. *arXiv preprint arXiv:2311.08725*, 2023.
- [2] Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygar. A general theory of liquidity provisioning for automated market makers, 2024. Workshop on Blockchains and Decentralized Finance at the 25th ACM Conference on Economics and Computation (EC'24).