

# 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 - May, 2026 (Expected)

*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

### University of Colorado Boulder

### Undergraduate Researcher

Research interests include topics in (broadly) theoretical computer science, especially algorithmic economics, matrix multiplication, computational social choice theory, and complexity theory.

*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.
- Active in the algorithmic economics reading group.

*Advised by* [Huck Bennett](#), *Ph. D.*

*February, 2025 - Present*

- Seeking to develop algorithms for special cases of the MATRIXMULTIPLICATIONVERIFICATION problem using rank-metric codes and other techniques from coding theory.

## PREPRINTS

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

## TALKS

1. 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.
- Scribed [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 AND AWARDS

- Admitted to [The Cornell, Maryland, Max Planck Pre-doctoral Research School in Computer Science](#) *March, 2025*
- Awarded a Boettcher Foundation Educational Enrichment Grant to Attend [STOC'25](#) *March, 2025*
- Awarded the Marlene Massaro Pratto and David Pratto Scholarship in Mathematics *June, 2024*
- Awarded the [Boettcher Scholarship](#) (Undergraduate Merit-Based Full Ride) *April, 2022*
- University of Colorado Boulder [Engineering Honors](#) Student *February, 2022*
- [National Merit Finalist](#) *February, 2022*
- Awarded the Horace M. Hale Esteemed Scholarship *January, 2022*
- Awarded the Colorado School of Mines Medal of Achievement in Mathematics and Science *May, 2021*

## SCHOLARLY SERVICE & ADDITIONAL RESEARCH ACTIVITY

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- Engineering Honors Program Admissions Reviewer *University of Colorado Boulder, 2024, 2025*
  - Executive Committee Member *2024*
- [Norlin Scholarship](#) Admissions Reviewer *University of Colorado Boulder, 2023, 2024, 2025*
- 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

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- [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).