# ADITHYA BHASKARA

Boulder, CO
officialadithya.github.io

*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

**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.
- Active in the algorithmic economics reading group.
- Assisted with reviewing papers.
- Research interests include algorithmic economics, computational social choice theory, complexity theory, and general topics in theoretical computer science.

- Preprints

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

- Talks

  1. Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. 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.
- MATH 2135: Linear Algebra for Mathematics Majors, Fall 2022. Compiled Course Notes.

**Silver Creek High School**

- Instructional Student Assistant Program Director, Fall 2021-Spring 2022.
- 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

- 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*
- 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 Papireddygari. A general theory of liquidity provisioning for automated market makers. *arXiv preprint arXiv:2311.08725*, 2023.

[2] Adithya Bhaskara, Rafael Frongillo, and Maneesha Papireddygari. 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).