

# Agustin Esteva

■ +1 (210) 906-6466 | @ aesteva@uchicago.edu | LinkedIn | Github | Chicago, IL 60615

## Education

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### University of Chicago

Chicago, IL

*BS in Mathematics, BA in Economics | GPA: 3.88/4.00*

Sep 2023 – May 2027

**Relevant Coursework:** Honors Analysis in  $\mathbb{R}^n$  | Markov Chains/Martingales/Brownian Motion | Econometrics | Intro to Computer Science I-II | Abstract Linear Algebra | Complex Analysis | Functional Analysis | Mathematical Logic | Graduate Game Theory | Honors Microeconomics

**University Advanced Scholars:** Selective scholarship for a five-year accelerated track to a Master's degree at UChicago

## Experience

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### Research Assistant in Political Economics

Chicago, IL

*Economics Research Assistant*

Jun 2025 – Present

- Worked under Nobel-laureate Dr. James Robinson to study the effects of policy on Rwanda's 'miracle economy' by analyzing satellite and governmental data using R, STATA, and machine learning
- Researched how social connectedness relates to productivity of government programs through advanced statistical and econometric analysis
- Developed an entailment algorithm using Python and model logic in order to provide a low cost solution to leverage the use of LLMs in the project

### UChicago Math Research Experience for Undergraduates

Chicago, IL

*Pure Mathematics Research*

Jun 2024 – Nov 2025

- Studied probability, real and complex analysis, combinatorics, algebra, financial mathematics, and stochastic calculus under UChicago professors and graduate students
- Researched, gave talks, and published a 20-page paper titled [Random Curves and Schramm-Loewner Evolutions](#) under the guidance of Professor Stephen Yearwood, with special emphasis on universality properties
- Published a 25-page expository paper titled [Measure Theory, Stochastic Calculus, and the Black-Scholes-Merton Model](#) on the measure theoretic derivation of the Black-Scholes formula using stochastic calculus and Girsanov's theorem

### Speer Mathnasium

San Antonio, TX

*Math Instructor*

Jun 2022 – May 2023

- Graded over 100 students' work, assignments, and performance while simultaneously providing instruction
- Balanced multiple students at once to give personalized instruction on subjects ranging from algebra to calculus

## Activities & Leadership

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### University of Chicago Mathematics Department

Chicago, IL

*Grader*

Aug 2024 – Jun 2025

- Responsible for grading and providing feedback on theoretical proofs for calculus problems for the UChicago Mathematics Department
- Graded 60+ students' work every week, and provided instructors with useful feedback on the difficulty of the course

### Rocketry Project

San Antonio, TX

*Project Manager*

Aug 2019 – Jun 2023

- Led the design and fabrication of a vehicle used to take a scientific payload 50,000 feet after approval and review of a mathematical flight profile presented to NASA flight engineers
- Built all parts of the 300-lbs vehicle using in-house industrial machines after designing them on AutoCAD
- Launched in June 2023 at White Sands Missile Testing Range (New Mexico) with an apogee of 23,000 feet

### Joint Science Technology Institute

Chicago, IL

*Materials Science Researcher*

Summer 2022

- Data analyst for Los Alamos National Laboratories, the Defense Threat Reduction Agency, and the University of New Mexico
- Studied materials science applications in nuclear engineering by analyzing data of Helium bubbling in Palladium samples using machine learning programs created with Python
- Presented findings to researchers on the application of machine learning on data analysis for nuclear fusion research

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**Skills:** Stochastic Calculus | Python | Excel | AutoCAD | LaTex | STATA | R Studio | Industrial Machines (Mill, Lathe, Drill, etc. . . )

**Honors/Awards:** Dean's List | University Advanced Scholar (Half-Ride Scholarship) | Hispanic Scholarship Fund Scholar

**Interests:** Bouldering | Math | Cello | Tennis | 🎬 Movies | Spikeball