

AUSTIN DECICCO

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EDUCATION

Rutgers University, New Brunswick NJ

M.S. in Mathematics — GPA 4.0/4.0

Expected May 2027

Rutgers University, New Brunswick NJ

B.A. in Mathematics — GPA 3.96/4.0, Summa Cum Laude

May 2023

University of Maryland, College Park MD

B.S. in Economics — Minor in Statistics

May 2022

RESEARCH INTERESTS

Quantitative finance; Stochastic investment models; Regime-switching models; Reinforcement Learning; Econometrics; Combinatorics.

RESEARCH

Statistical Properties of Permutations and SYT Reflected by the Robinson-Schensted Algorithm

With Jike Liu — Experimental Mathematics (Prof. Zeilberger), Rutgers, Spring 2026

- Computational study of the RS bijection in Maple: verified the Logan–Shepp limit shape and the $\lambda_1/\sqrt{n} \rightarrow 2$ convergence for the longest increasing subsequence.
- Quantified the covariance and correlation of longest increasing / decreasing subsequence lengths, and tested an asymptotic-independence conjecture for fixed-entry locations in the insertion and recording tableaux.
- Ran row/column-sum-vector uniqueness experiments on standard Young tableaux, producing candidate integer sequences.
- Generated bootstrap datasets ($n = 1$ to 30 , up to $3,000$ samples per n) and consolidated the Maple source; paper draft, slides, code, and data at austindecicco.com/gradp.html.

Independent Continuation (Sole Author)

Self-directed manuscript in progress

- Independently extending the work above beyond the course project, toward original results and theorems pertaining to row and column sum vectors of standard Young tableaux; early-stage manuscript in progress.

SELECTED COURSEWORK

Graduate (in progress, Fall 2026): Theory of Functions of a Real Variable, Abstract Algebra, Combinatorics.

Graduate (Rutgers, completed): Experimental Mathematics (A), Graph Theory (A), Introduction to Mathematical Physics (A), Probability in Discrete Mathematics (A).

Undergraduate (Rutgers / Maryland): Introduction to Stochastic Processes (A), Mathematical Theory of Statistics (A), Advanced Econometrics (A), Econometrics (A+), Game Theory (A).

EXPERIENCE

Independent Investor (Self-Directed)

May 2023 – Present

U.S. Equity Markets

- Special-situations and thematic equity. Largest successes were a post-restructuring position in American Coastal Insurance (ACIC, formerly UIHC); as well as held thematic AI and semiconductor exposure during the 2023–2024 rally.
- Directed end-to-end renovation of residential property: managed contractors, capital improvements, and project accounting on a six-figure rehabilitation budget.
- Founded and manage a REI LLC based in Wyoming.

Cryptocurrency Arbitrage (Self-Directed)

2020 – 2022

Ethereum and VeChain DeFi Ecosystems

- Manually executed cross-DEX arbitrage on Ethereum (Uniswap) and VeChain (Vexchange, Betterswap, and others) during the 2020–2022 DeFi cycle; the entry threshold scaled with capital and gas to clear fixed and proportional fees plus a buffer for expected spread decay over the ~5-minute manual execution window.

TECHNICAL SKILLS

Programming: Python, Maple, Java, SAS, Stata, MATLAB, $\text{\LaTeX}$, HTML, CSS.

Quantitative: stochastic processes, mathematical statistics, time-series and panel-data econometrics, regression and hypothesis testing, combinatorics, Monte Carlo and bootstrap methods.

Markets: 10+ years personal trading (equities, options, crypto); fundamental and special-situations equity analysis.

SERVICE & OUTREACH

Volunteer Firefighter — Flemington Fire Department, NJ

May 2024 – Present

Executive, College Park Student Investment Group

2020 – 2021

University of Maryland

- Led group meetings, prepared market commentary, and taught peers equity-market and trading mechanics.