James Hutchinson

Brunswick, GA

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My Website

Education

Johns Hopkins University

- Distance Student (Spring 2025)
- Course: Real Analysis II

College of Coastal Georgia

- B.S. Pure and Applied Mathematics (Cum Laude), Graduated Dec 2024
- Minor: Economics
- GPA: 3.67
- Relevant Courses: Complex Variables, Real Analysis, Topology, Number Theory, Numerical Analysis, Number Theory, Abstract Algebra, Discrete Math, Physics I/II, Statistics I/II, Differential Equations

Glynn Academy

- High School Diploma, Graduated May 2022
- GPA: 4.0
- Relevant Courses: Calculus I & II (with a 5 on the AP Calculus AB/BC Exam)

Georgia Institute of Technology

- High School Dual-Enrollment, Fall 2020-Spring 2021
- Courses: Linear Algebra, Multi-variable Calculus

Presentations

- Robison, E., Hutchinson, J., McLachlan, R. "Applying Modern Biodiversity Indices to a Pleistocene Fossil Assemblage from Clark Quarry, Georgia, USA." Accepted for poster presentation, American Geophysical Union Conference, New Orleans, Louisiana, December 2025.
- Hutchinson, J. "Cantor Set Arithmetic." Upcoming Oral Presentation, College of Coastal Georgia, November 18 2025.
- Robison, E., Hutchinson, J., McLachlan, R. "Georgia's Past Biodiversity and Climate: Applying Modern Biodiversity Indices to a Pleistocene Fossil Assemblage from Clark Quarry, Georgia, USA." Poster Presentation, Georgia Resiliency Conference, Jekyll Island, Georgia, October 2025.
- Hutchinson, J. "Exploring the Sierpiński Carpet." Separate Oral and Poster Presentations, College of Coastal Georgia Endeavor Symposium, April 2025.

[1] Updated 11/11/2025

- Jacoby, A., Hutchinson, J., Hannah, C., Narehoood, J., Ghosh, A., Padmanabhan, S. "Mathematical Model of Legislating Climate Policy." Poster Presentation, College of Coastal Georgia SOURCE Conference, April 2024.
- Jacoby, A., Hutchinson, J., Hannah, C., Narehoood, J., Ghosh, A., Padmanabhan, S. "Mathematical Model of Legislating Climate Policy." Poster Presentation, 16th Annual International Symposium on Biomathematics and Ecology Education and Research (BEER), Virginia Commonwealth University, November 2023.

Research Experience

Cantor Set Arithmetic Research Project (Summer 2025-Present)

- Advisor: Dr. Aaron Yeager
- Purpose: Construct a new geometric proof for the fact that $\{x^2y : x, y \in C\} = [0, 1]$, where C is the middle-third Cantor Set
- Relevant Contributions: **The proof is almost complete, and a write-up is available on my website**; a suite of tools made in Python 3 for the purpose of studying how the resultant Cantor Dust intersects level curves, as well as automatically checking for gaps in images of functions evaluated over disjoint closed domains
- Tools Used: Python 3, Matplotlib, Numpy
- When completed, the research will be submitted to Kappa Mu Epsilon's journal, The Pentagon
- Will be submitted to the College of Coastal Georgia Coastal Science Symposium for poster presentation this December

Basel Problem Research Project (Fall 2025)

- Advisor: Dr. Aaron Yeager
- Purpose: Prove $\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$ using Calculus II techniques, and connect the result to the Riemann zeta function and the probability of natural numbers being coprime; a class project for the fall 2025 Calculus II class
- Will be submitted to the College of Coastal Georgia Coastal Science Symposium for poster presentation this December

Paleoecology Research Project (Summer/Fall 2025)

- Advisor: Dr. Robin McLachlan
- Purpose: Understand the relationship between ecological biodiversity and climate change over large time intervals
- Hosted by College of Coastal Georgia and their Fossil Lab
- Unique Contribution: New data on micro fossils deposited around the megafauna extinction interval at the end of the Late Pleistocene
- Tools Used: Python 3, JupyterLab, Pandas, Matplotlib, Excel

Sierpiński Carpet Research Project (Spring 2025)

- Advisor: Dr. David Lipham
- Purpose: Understand the topological structure and construction of the Sierpiński Carpet in preparation for fractal research

Cross-Institutional Undergraduate Research Experience (CURE 2023)

- Advisor: Dr. Aaron Yeager
- Purpose: Biomathematics Research
- Hosted by Illinois State University and the Intercollegiate Biomathematics Alliance
- Workshop for R, math modeling, topology, and statistics
- Compared models for predicting cancer growth in mice
- Conducted research on congressional systems using biomathematical models involving differential equations

Teaching Experience

Tutor, College of Coastal Georgia

- Spring 2024 - Present

Supplemental Instructor, College of Coastal Georgia

- Calculus II, Fall 2025
- Elementary Statistics, Fall 2025
- College Algebra, Spring 2025
- Macroeconomics, Spring 2025
- Macroeconomics, Fall 2024
- College Algebra, Summer 2024
- Macroeconomics, Spring 2024

Leadership Experience

Officer, College of Coastal Georgia Math and Data Science Club

- President, Spring 2024
- Vice President, Fall 2023
- Organized mixers and talks

President, Glynn Academy Jiu-Jitsu Club

- Led club operations and taught, 2018-2019

Professional Experience

Partner & Administration, Reliant Insurance Group

- Organization, Administration, Logistics, June 2021-Present
- St. Simons Island, GA

Skills

- LaTeX, Python, Excel

Awards & Membership

- Member and Vice President of the Georgia Theta Chapter of the Kappa Mu Epsilon National Mathematics Honor Society, 2025-Present
- Outstanding Senior in Mathematics, 2023-2024
- College of Coastal Georgia Windward Scholar, 2022
- Brewton-Parker College Future Baron Scholar, 2022
- University of Georgia Certificate of Merit, 2022
- Woffard College Scholar, 2022
- National Honor Society Member
- AP Distinguished Scholar Award, 2020
- Student Leadership Program's Student Excellence Award, 2018-2019