

Sean Mackin

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Education:

Senior Honors Math and Computer Science Major at New York University (GPA 3.8)

Valedictorian of Starkville High School, Class of 2018: Highest Honors, Honors, Senior of Distinction (class size ~330)

Research Experience:

★ Applied Math Summer Undergraduate Research Experience at NYU, Summer 2021

Worked as a student researcher with a research group to develop a novel model for simulating the advection, diffusion, and collision of sea-ice-floes in the Arctic Ocean; presented our results to NYU.

NYU Sea-Ice (MURI) Cont. Research, 2021-22

Continued research from AM-SURE with further development of our models and currently in the process of writing a paper with our findings.

Epidemiological Modelling and Computing Assistant at Mississippi State University's College of Veterinary Medicine, 2021

Researched and developed examples of veterinary epidemiological models; worked to create better / more interactive teaching tools for classroom use.

Honors and Awards:

- NYU AM-SURE, chosen to participate, 2021
- MCM / ICM, successful participants, 2019/20
- ★ National Merit Scholar, 2018
- US Presidential Scholars Candidate, 2018
- International Honor Thespian, 2018
- Starkville High Hall of Fame, 2018
- National AP Scholar, 2018
- Best Sound Design and Original Composition, Southeastern Theatre Conference, 2016

programming languages:

proficient: C/C++, Python, Java, MATLAB, Javascript, and HTML/CSS

Leadership Experience:

NYU Math Society

- ★ Co-President (2022) – coordinated member events and recruitment/student research advisement
- Academic Chair (2021) – organized and facilitated academic and industry related talks/panels

At Starkville High School

- President of Mu Alpha Theta (Math Club)
- President of Key Club (Volunteering Club)
- Zacharias Leadership Conference at Mississippi State University, 2018

Work Experience:

- Paid Research at Mississippi State University and New York University, 2021
- Athletic-Academic Tutoring at Mississippi State University, 2021
- BOH Cook and Dishwasher at Oby's in Starkville, MS, 2019-2020
- YACS Open-Source Class Search Software (BUGS) Developer, 2018

Major Courses Taken:

Honors Algebra II, Prof. Goodman
★ Graduate Analysis II, Prof. Shatah
Functions of a Complex Variable, Prof. Pain
Honors Theory of Probability, Prof. Lubetsky
Honors ODE, Prof. Pauluis
Honors Analysis I, Prof. Shatah
Honors Algebra I, Prof. Hang
Honors Linear Algebra I, Prof. Serfaty
Honors Calculus III, Prof. Leingang
Discrete Mathematics, Prof. Pain
Applied Internet Technology, Prof. Versoza
Theory of Computation, Prof. Khot
Operating Systems, Prof. Gottlieb
Basic Algorithms, Prof. Yap
Computer Systems Org, Prof. Alljabouli
Data Structures, Prof. Klukowska
Intro. to Computer Simulation, Prof. Peskin
Intro. to Computer Science, Prof. Locklear