

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