Last updated in September 2025

Messiah Ridgley II

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Experience

TECBio NSF REU Program, Student Researcher — Pittsburgh, PA
May 2025 - July 2025

- Collaborated with clinical oncologists to build a model for radiation-induced lymphocyte depletion in Python.
- Presented at the 2025 Society for Immunotherapy of Cancer conference.
- Led mentoring team for the Computational Biology high school program, resulting in eight high school students giving successful research presentations.

Brandeis University Student Support Services Program, Tutor — Waltham, MA
September 2024 - May 2025

- Mentored peers in weekly one-on-one meetings for three core computer science courses.

ACRES NSF REU Program, Student Researcher — Lansing, MI
May 2024 - July 2024

- Collaborated with peers to research novel techniques in topological data analysis, resulting in one preprint publication.
- Designed professional slides in LaTeX Beamer, as evidenced by a well-attended talk at the annual SUMMR Conference.

Paul Miller Lab at Brandeis University, Student Researcher — Waltham, MA
May 2023 - July 2023

- Built a differential equations model in MATLAB to investigate the role of competition between neurons in conditioned taste aversion.

Publications

On the Stability of the Euler Characteristic Transform for a Perturbed Embedding — June 2025
Jasmine George, Oscar Lledo Osborn, Elizabeth Munch, ***Messiah Ridgley II***, Elena Xinyi Wang
arxiv.org/abs/2506.19991

Education

Brandeis University, B.S. Hons. Applied Mathematics, B.A. Computer Science — Sept 2022 – May 2026

- GPA: 3.45/4.00
- Dean's List for Four Semesters
- Quantitative Biology Research Community (QBReC) Scholar
- **Coursework:** Introduction to Mathematical Research, Introduction to Computational Neuroscience, Effective Communication for Computer Scientists, Biomedical Statistics in R, Topics in Applied Mathematics

UMass Dartmouth, Biotechnology Apprenticeship Program — June 2022 - August 2022

- Attended training in a variety of techniques used in biotechnology and medical laboratory sciences.

Technologies

Languages: Python, JavaScript, MATLAB

Technologies: GitHub, PyCharm, VS Code, RStudio, Excel