

Alex Crocker

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Education

PhD, Bioinformatics and Computational Biology | UNC Chapel Hill, Chapel Hill NC | Aug. 2019 - Aug. 2025

BA, Biology | Hendrix College, Conway AR | Aug. 2011 - May 2016

Experience

Postdoctoral Fellow | University of Minnesota - Biotechnology Institute | Nov. 2026 - Present

- Characterized living materials for water treatment and environmental remediation.
- Managed department microscope. Trained new users and maintained good instrument condition.

Visiting Scholar | Duke University School of Medicine | Mar. 2023 - Aug. 2025

- Developed protocols and software standards in the lab.
- Collaborated on research projects resulting in multiple publications.

Graduate Researcher | University of North Carolina at Chapel Hill | Aug. 2019 - June 2025

- Used computational modeling to discover and test signaling networks within live cells.
- Managed and mentored undergraduate and graduate students.
- Taught courses on Python for Biologists and assisted teaching undergraduate and graduate Biology courses.

Teaching assistant | Woods Hole Marine Biological Laboratory | June 2024

- Taught scientists (PhD students and postdocs) to combine experiments and imaging with computational modeling.
- Helped students formulate, execute, and present their scientific projects.

Laboratory Technician | Dartmouth College | Sep. 2016 - July 2019

- Contributed data, figures, and text for the publication of multiple research articles.
- Collaborated with medical professionals to design and execute translational research projects.

Skills

Scientific: Fluorescence microscopy techniques (Confocal, FRAP, TIRF-M), scientific writing, cell biology, microbiology (bacteria and fungi), molecular biology and genetics, genomics and transcriptomics, metabolic modeling, flow cytometry

Computational: Python (NumPy, Pandas, scikit-learn, Biopython), Unix, Git, GitHub, Conda, Docker, Make, Snakemake, Jupyter, Julia programming language, R programming language (R-shiny, ggplot2), matlab, statistical modeling, ODE and PDE modeling

Hobbies: Beer brewing, rock climbing, macro photography, running