Jonathan Fogel

linkedin.com/in/fogeljonathan
github.com/fogeljonathan

Mobile : +1-484-326-1355
Email : fogeljonathan@gmail.com
Personal Site : fogeljonathan.github.io

Education

Franklin & Marshall College — Lancaster, PA
Physics and Mathematics Double Major — *Aug. 2017 – May 2021*

Physics: GPA: **3.64** /4.00. **Relevant Coursework:** Analytical Mechanics, Electric and Magnetic Fields, Electronics, Experimental Methods, Mathematical Methods, Modern Physics, Quantum Mechanics, Statistical and Thermal Physics.
Mathematics: GPA: **3.48** /4.00. **Relevant Coursework:** Abstract Algebra, Advanced Linear Algebra, Analysis, Calculus III, Fourier Series, Linear Algebra and Diff Eq, Probability and Statistics, Statistical Modeling.

Experience

Assistant Staff — Lexington, MA
MIT Lincoln Laboratory — *Aug 2021 - Present*

Worked with the Air, Missile, and Maritime Defense Technology Division's Advanced Concepts Group to provide innovative solutions and analysis in support of National Defense.
Created, updated, and maintained remote Julia projects in both classified and unclassified Gitlab instances.
Aided in the development and implementation of project- specific algorithms by revising code to follow academic work.
Analyzed both legacy code and current projects to improve efficiency and runtimes.
Simulated and visualized large-scale battle management scenarios to assess and test resource coordination logic.

House Advisor — Lancaster, PA
Franklin & Marshall College — *Aug 2018 - May 2021*

Proactively mentored and supervised groups of 20 students per academic year.
Executed well-informed critical decision making in emergency situations to create a safe living environment.
Planned events aimed at group sizes of 20-100 people to encourage social, cultural, and informative dialogue.

NSF REU Research Assistant — Fort Collins, CO
Colorado State University — *Jun 2020 - Aug 2020*

Designed optical equipment with SOLIDWORKS and COMSOL Multiphysics for use in ion beam sputtering systems.
Simulated strain and deformation on equipment designs with SOLIDWORKS to determine the strength of designed parts.
Dynamically adapted to a remote format to maintain safety while contributing to meaningful work.
Coordinated with researchers between multiple time zones to sustain a healthy, cross-functional team.
Presented results to a diverse group of researchers using exceptional communication skills and understanding of the project.

Undergraduate Researcher — Lancaster, PA
North American Nanohertz Observatory for Gravitational Waves (NANOGrav) — *Aug 2018 - May 2020*

Performed observations on potential pulsars by remotely controlling the Aricebo Radio Telescope.
Rated thousands of Aricebo data sets to rank radio images and timing arrays by the likelihood of discovering a pulsar.
Worked within small teams as a senior member to coordinate pulsar research efforts.
Presented monthly to members of the NANOGrav consortium across the US to share findings.

Quantum Optical Physics Research Assistant — Lancaster, PA
Franklin & Marshall College, Department of Physics and Astronomy — *Jun 2019 - Aug 2019*

Leveraged Python on a Linux platform to develop a frequency resolved optical gating(FROG) program.
Characterized a femptosecond-range pulsing laser system by conducting experiments with the FROG program.
Designed and implemented a graphical user interface into the FROG program for a user-friendly experience.
Presented findings to over 200 people in an institution-wide research setting, using an in-depth understanding of physical processes to communicate abstract results with an audience unfamiliar with the topic.

Awards

John Kershner Scholar: Franklin & Marshall Physics and Astronomy Departmental Award, May 2021

Franklin & Marshall College Honors List, Spring 2020, Spring 2021

Franklin & Marshall College Dean's List, Fall 2018, Spring 2019, Fall 2019, Fall 2020

Eagle Scout, Feb 2017

Skills

Proficient In: Julia, Python, Git, LaTeX, R, SOLIDWORKS, Microsoft Office Suite

Experience In: MATLAB, COMSOL Multiphysics, JavaScript, CSS & HTML

Interests: Rock Climbing, Guitar, Mandolin, 3D Printing