Grace Guinan

Charlottesville, VA
gsg9rj@virginia.edu
www.linkedin.com/in/grace-guinan898/

U.V.a. Math & Data Science Student
Graduated May 2024

EDUCATION:

The University of Virginia   Charlottesville, VA
B.A. Mathematics, Minor Data Science   2020-2024
- GPA: 3.7
- Relevant Coursework: Advanced Linear Algebra, Intro to Probability, Data Structures and Algorithms 1 and 2, Foundations of Machine Learning, Communicating with Data, Statistical Computing with Python and R, Statistical Machine Learning

---

RESEARCH EXPERIENCE:

Maryland Sea Grant   Chesapeake Biological Laboratory, MD
Research Experiences for Undergraduates (REU) Fellow   May 2023-September 2023
- Conducted NSF-funded research project titled "*New Applications of Machine Learning in Analytical Chemistry*" under the mentorship of Dr. Michael Gonsior and Dr. Dong Liang
- Coded in R using the modern machine learning method Sparse Orthogonal FActor Regression (SOFAR) and created R Markdown progress updates (posted on RPubs)
- Produced research proposal, 10-minute presentation, 3-minute lightning talk, data visualizations, poster, & final paper

U.Va. Mathematics Department   Charlottesville, VA
Directed Reading Program   August 2022-January 2023
- Investigated the overlap in linear and abstract algebra using Representation Theory, the Symmetric Group, partitions, and matrices in collaboration with Ph.D. student Eleanor McSprit
- Communicated learning in LaTeX-formatted presentation entitled "The Relationship of p(n) and S_n" and delivered 20-minute presentation to U.Va. math faculty and peers

North Carolina State Electrical and Computer Engineering Department   Raleigh, NC
Research Intern   Spring and Summer 2019
- Participated in a Mentorship Program in Dr. Alper Bozkurt's iBionicS Lab and engaged in a citizen-science research project in collaboration with IBM and Guiding Eyes for the Blind
- Prepared and delivered 10-minute final research presentation during Summer Mentorship Symposium

---

PUBLICATIONS & CONFERENCES:

- 2024 Ocean Sciences Meeting in New Orleans, LA: Presented poster "New Applications of Machine Learning in Marine Biogeochemistry" in session *Recent Advances in Understanding the Ocean Carbon Cycle*
- **M. Gonsior**, M. Lahm, L. Powers, F. Chen, S. L. McCallister, **D. Liang**, **G. Guinan** and P. Schmitt-Kopplin, (2024). Optical Properties and Molecular Differences in Dissolved Organic Matter at the Bermuda Atlantic and Hawai'i ALOHA Time-Series Stations. *Environmental Science: Advances* 10.1039/D3VA00361B (*publication just accepted !*)

COMMUNITY LEADERSHIP & INVOLVEMENT:

U.Va. School of Data Science   Charlottesville, VA
Mathematics for Data Science Teaching Assistant   August 2023-Present
- Assist Dr. Gianluca Guadagni 10 hrs/week with planning and teaching a new course in the Data Science major at UVA with topics including: linear algebra, probability, matrix decomposition, vector calculus, machine learning, dimensional reduction
- Hold weekly office hours, grade homework/exams, and prepare python assignments

WXTJ Student Radio   Charlottesville, VA
Treasurer and Radio DJ   October 2021-Present
- Active member of WXTJ Executive Board and overseer of WXTJ finances
- Host weekly 2 hour radio show with music and commentary

PROGRAMMING LANGUAGES/TOOLS :

- Python, R, SQL, Java, LaTeX, GitHub, RMarkdown, Jupyter Notebook, R Shiny App, ggplot