JACK E. GRAHAM

Oviedo, Florida 32765 • jgraham@hillsdale.edu

Education

BS in Mathematics, Minor in Computer Science, Hillsdale College   Received 2023
- Honors: **Dean's List, 3.98 GPA**, Summa Cum Laude, Departmental Honors Thesis
- Collegiate Scholars Program, Hillsdale College   2020 to 2023
- Ruth Schulz Math Prize, Hillsdale College   2021-2022 Recipient
- Computer Skills: Python, C, C++, Microsoft Excel, Linux

Pursuing Ph.D. in Mathematics, University of Florida   Fall 2023 to Present
- Graduate Teaching Assistant, Calculus I   Fall 2023 to Present

Relevant Experience

Director's Summer Program Intern, Department of Defense, NSA   Summers 2022, 2023
- Used upper-level mathematics to design a novel, practical crypt scheme for efficiency and security (2022)
- Implemented and modified neural network architectures within the context of high performance computing setups to find preferred hyperparameters in the creation of a classifier for a novel research problem. (2023)
- Briefed the Director of the National Security Agency on novel cryptanalytic techniques designed to support critical national intelligence needs
- Presented to professional researchers at Bowie Center for Computing Sciences (CCS), the Institute for Defense Analyses at Princeton Center for Communications Research (CCR), and GCHQ.
- Compiled detailed research results into two co-authored, internally published technical papers
- Received Top Secret (TS) Information and Sensitive Compartmented Information (SCI) clearances

Mathematics Research Intern, Hillsdale College Department of Mathematics, MI   Summer 2021
- Proved a new mathematical theorem about the equal time property of the discrete brachistochrone
- Assisted professor in mathematical research related to theorem discovery (for a published paper)
- Studied related fields such as the calculus of variations and the classical brachistochrone

Applied Math Club, Hillsdale College – **President** 2022 to 2023   Fall 2019 to Spring 2023
- Gaining leadership experience in presenting and administrating math modelling club activities
- Surveyed large sections of the student body and analyzed resulting data to model social interconnectedness
- Worked on a team to analyze financial strategies for Spartan Truck Company
- Preparing for and participating in the COMAP Mathematical Contest in Modelling

Additional Experience

Accounting Intern, RA Simasek PA, Orlando, FL   Spring 2018 to Winter 2022
- Prepared individual and corporate tax returns for firm clients
- Researched new changes to the IRS tax code such as tax repercussions of COVID-19 regulations
- Supervised, managed, and taught new employees in both clerical and tax-related jobs

Sigma Zeta (Math and Science Honor Society) – **Secretary**   2022 to 2023
- Communicating with fellow officers and chapter members, both planning meetings and recording minutes
- Tracking initiated members information such as service hours, attendance, and chapter standing

Kappa Mu Epsilon (Math Honor Society) – **Vice President**   2021 to 2022
- Developed administrative skills planning and scheduling chapter meetings with fellow board members
- Coordinated with event speakers to set up talks and public debates

A Few Good Men Volunteer, Hillsdale College Volunteering Club   Fall 2019 to Spring 2021
- Volunteered with fellow classmates to assist elderly and needy individuals in the local community
- Performed 60 hours of community service including farm work, yardwork, and building houses