Milligan Grinstead

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Education

HARVARD UNIVERSITY Cambridge, MA
Bachelor of Arts, Joint in Mathematics and Computer Science. GPA: 3.9 May 2026

MCGILL-TOOLEN CATHOLIC HIGH SCHOOL Mobile, AL
Valedictorian. 11 AP Courses. ACT: 35. National Merit Finalist. May 2022

Technical Skills & Projects

Programming: React (Typescript); Python; C++; OCaml; Rocq; SQL
Platforms: Databricks; PostgreSQL; Mixpanel; GitHub

Randomized Algorithms for the Number Partition problem: CS1240 Assignment April 2025
Wrote functions to solve the NP-Complete Number Partition problem with various randomized and deterministic algorithms using heuristics such as hill climbing, simulated annealing, and differencing, and analyzed the performances.

Topological Data Analysis: Soft Math Lab January - May 2024
Created a custom persistence filtration to quantify the amount of branching in a network based on the physical distance between branches and trained this on a machine learning algorithm. Implemented in Python with NumPy, MatPlot, NetworkX, Persim, and Ripser. Committed 7-9 hours/week and supervised by Harvard Professor Mahadevan.

Digitized Game of Clue: CS50 Final Project September - December 2023
Implemented an interactive multiplayer game based on the popular board game Clue with HTML, SQL, and Python.

Relevant Experience

STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE (SEDS) Cambridge, MA
Project Manager May 2024 - Present
- Coordinate team, manage timelines and deliverables, and assist with documentation and communication with NASA as we prepare to launch under a CSLI grant

Bus Mechanical Team Lead January 2023 - May 2024
- Guided the mechanical team in designing and manufacturing the satellite's skeleton and altitude determination control system (ADCS)

NUMINAR Arlington, VA
Software Engineer and Customer Service Intern May 19 - August 31 2025
- Developed web and iOS features with React and React Native
- Integrated analytics with June and Mixpanel to track user behavior and feature usage
- Queried and analyzed data with SQL on Databricks and PostgreSQL
- Resolved customer inquiries and provided technical support

Interests

GRAPH THEORY
- Researched Prism-Hamiltonian Bipartite graphs and their toughness (results under review for publication) for 40 hr/wk under the supervision of Harvard Professor Philip Wood June 8 - August 10 2024
- Thesising on the implementation of graph theory in Rocq September 2025 - Present

TEACHING
- Peer Tutor for linear algebra, calculus, statistics, and proof-writing, 4 hr/wk Nov. - May 2024, Aug. 2025 - Present
- Discrete Mathematics for Computer Science Course Assistant, 8hr/wk January - May 2025
- Multivariable Calculus Course Assistant, 8hr/wk September - December 2024