William Oscar Harris

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Education

Duke University | Durham, NC   May 2026
Mathematics, B.S. and Computer Science, B.S.
GPA: 3.88/4.00
Awards and Honors: Dean's List with Distinction (Fall 2023)
Relevant Coursework: MATH 333 Complex Analysis, MATH 230 Probability, COMPSCI 250 Computer Architecture, ECON 101 Economic Principles, MATH 89S Math and Medicine, COMPSCI 260 Intro to Computational Genomics

Community School of Davidson | Davidson, NC   June 2022
GPA: Unweighted: 4.0/4.0 | Weighted: 4.444/4.0
Awards and Honors: AP Scholar with Distinction, Varsity Cross Country Coach's Award, National Honor Society

Experience

Teaching Assistant, Computer Architecture | Duke University | Durham, NC   August 2023-Present
- Assist 80+ students in weekly office hours to conceptualize and debug programs in C and MIPS assembly and review course concepts such as memory caching, virtual memory and input/output
- Lead weekly recitation; guide 20 students through professor-prepared lesson clarifying complex class concepts

Student Researcher, Math+ | Duke University | Durham, NC | Project Website   May 2024-July 2024
- Self-studied fundamentals of Lean Theorem Prover and introductory abstract algebra
- Developed interactive educational tool with team of six student researchers to supplement classroom instruction of abstract algebra with lessons in how to use Lean to formalize mathematics

Projects

Board Game Digitalization | Personal | GitHub Repository   January 2023-Present
- Terminal-based Rust project; over 5000 lines of code utilizing multiprocessing and raw TCP connections
- Digitalized *Acquire*, an antique board game, into robust UNIX terminal application
- Designed panel-based GUI engine for the UNIX terminal leveraging ASCII characters

Bone Remodeling Research | MATH 89S Math and Medicine | GitHub Repository   March 2023-April 2023
- Created simulator in Rust for research titled "Bone Remodeling as a Spatial and Non-Spatial Evolutionary Game"
- Delivered two oral presentations on my research to students and professor in seminar class

Leadership Experience

Ministry Leadership Team | Duke Reformed University Fellowship | Durham, NC   August 2023-Present
- Manage logistics and set up equipment for weekly worship and community-building meetings with 20+ attendees
- Prepare and lead weekly group studies through topics in the Bible with 5+ attendees

Eagle Scout | Scouts BSA Troop 58 | Davidson, NC   March 2021
- Project leader for conservation and beautification of historic English garden on my high school campus
- Project highlights include garden design, fundraising $1500 for materials, leading 22 volunteers for 120 man-hours

Volunteer Experience

Summer Camp Counselor | Project 658 | Charlotte, NC   July 2023-August 2023
- Orchestrated games and academically enriching activities for 40 children ages 5-12 at summer camp providing access to resources and academic aid for underprivileged families in the Charlotte area

Skills and Interests

- Skills: mathematical problem solving, Rust, Java, JavaScript, Python, C#, C, R, UNIX Shell, Microsoft Office Suite
- Interests: board games, distance running, playing trombone, hiking & backpacking