Harrison Mesh

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EDUCATION

University of Florida **Gainesville, FL**
B.S. in Computer Science; intended second major in Mathematics GPA: 4.0/4.0; August 2025 – Present

- Honors: Honors Program, University Research Scholars Program, Dean's List, President's Honor Roll
- Relevant Coursework: Calculus III Honors, Advanced Programming Fundamentals, Abstract Algebra, Linear Algebra

High Technology High School **Lincroft, NJ**
High School Diploma GPA: 4.0/4.0; September 2021 – June 2025

HONORS

William Lowell Putnam Mathematical Competition: Scored 21/120 (2025)
SCUDEM X: Outstanding Prize
National Merit Finalist
MathWorks Math Modeling Challenge: Semi-Finalist, $1500 Scholarship
AIME Qualifier

WORK EXPERIENCE

Iowa State University **Ames, IA**
Math REU - Temporal Logic June 2026 – August 2026

- Selected for a full-time mathematics REU in temporal logic and formal methods, culminating in a written and oral presentation at MathFest.
- Formal verification of algorithms translating Mission-time Linear Temporal Logic (MLTL) into propositional logic using Isabelle/HOL, building on NASA-aligned formalizations to ensure correctness of time-sensitive safety-critical system specifications.

Bloomberg L.P. **Princeton, NJ**
Engineering Data Technologies Intern - Crowdsourcing February 2025 – May 2025

- Built an internal API pipeline that aggregated outputs from document-processing services to extract text and image information from financial documents.
- Participated in weekly engineering meetings for a document-analysis tool, providing user feedback and workflow suggestions that informed feature design.

TECHNICAL PROJECTS

ByteChess **Remote**
Chess Engine - Rust June 2025 – January 2026

- Developed a chess engine in Rust using iterative deepening, transposition tables, move ordering, evaluation heuristics, alpha-beta pruning, and null-move pruning.
- Estimated playing strength of 2000 to 2100 Elo in classical chess; capable of defeating expert-level players.

LeanTeX **Remote**
Lean Analyzer - C++ December 2025 – Present

- Built a compiler-style tool that parses Lean abstract syntax trees and generates readable LaTeX explanations, translating formal proofs into structured English.
- Currently supports propositional logic and is designed to extend to richer proof systems.

SKILLS

Languages: Python, C++, Rust, SQL
Tools/Other: Lean, Isabelle/HOL, Git