

Michael Moorman

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GitHub Profile

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LinkedIn Profile

EDUCATION

Harvard University

2021-2025

A.B. Computer Science Honors, Minor in Mathematics, Spanish Language Citation

GPA: 3.97/4.0

- **Relevant Coursework:** Data Structures and Algorithms, Systems Programming & Machine Architecture, Data Science, Real Analysis, Probability, Abstract Algebra, Linear Algebra, Multivariable Calculus
- **Publications:** Moorman, Michael J.; Quijano, Gabriel B.; and Williams, Matthew C. Jr. (2024) "Counting Rotational Sets for Laminations of the Unit Disk from First Principles," *Rose-Hulman Undergraduate Mathematics Journal*: Vol. 25: Iss. 2, Article 8. Available at: <https://scholar.rose-hulman.edu/rhumj/vol25/iss2/8>

RELEVANT EXPERIENCE

Arch

August 2025 - Present

Software Engineer

New York, NY

- Led end-to-end architecture and launch of a production Microsoft Office add-in (React + Node.js), implementing Auth0-based multi-tenant authentication and security hardening (CORS, tenant isolation) to meet Microsoft Marketplace compliance standards.
- Re-architected large-file ingestion pipeline to support streamed and compressed uploads (150MB+), eliminating server OOM crashes and stabilizing AI research workflows under high-memory workloads.
- Architected and provisioned AWS infrastructure (ECS Fargate, S3, CloudFront) using Terraform and GitLab CI, establishing automated multi-environment, zero-downtime deployments and secrets management for production-grade reliability.
- Led iterative schema evolution under active production traffic, introducing activity-level foreign keys, feature flags, and constraint enforcement while maintaining backward compatibility through controlled data migrations.
- Built the My Opportunities platform used by dozens of institutional investors, implementing deduplication across activity records, asynchronous processing state management, analytics instrumentation, and scalable React state architecture.

Nokia

June 2024 - August 2024

AI Solutions Engineering Intern

Naperville, IL

- Designed and evaluated multiple deep learning models to classify remediation actions for software vulnerabilities across Nokia's internal security pipeline, achieving 92% top-1 accuracy and materially reducing manual triage workload.
- Fine-tuned a BERT-based NLP model to generate human-readable rationales for predicted actions, enabling security engineers to validate model decisions and increasing trust in automated remediation workflows.

Verizon

June 2023 - August 2023

Software Engineering Intern

Remote

- Designed and implemented REST API endpoints in Java with Spring Boot, allowing for analysis of vast datasets comprising billions of data points from 100+ Key Performance Indicators extracted from Verizon's 5G network.
- Implemented an LSTM Autoencoder in PyTorch for anomaly detection in Verizon's 5G network, spanning more than 70,000 cell-sites, leading to the efficient identification of dozens of types of subtle network errors.
- Collaborated with cross-functional teams of dozens of individuals to perform root cause analysis on anomalies identified through the LSTM Autoencoder, enabling Verizon to proactively address network issues and enhance network performance.

Radiance Technologies

May 2022 - August 2022

Simulation and Modeling Engineering Intern

Huntsville, AL

- Researched and implemented multiple reinforcement learning algorithms in Pytorch to automate weapon-target assignment in command-and-control air defense systems, leading to the completion of the government contract significantly under-budget and ahead of schedule.
- Designed all algorithms related to scenario simulation and reinforcement learning agent coupling with AFSIM (Simulation and Modeling Framework), enabling the model to be used in multiple environments, increasing the versatility of the model and allowing for rigorous and efficient testing.
- Developed a simulation environment for air defense systems in C++, allowing for real-time simulation and testing of models and algorithms, increasing the efficiency of the development process.

Harvard University

August 2022 - December 2024

Teaching Fellow, Course Assistant, and Tutor

Cambridge, MA

- Taught Algorithms and their Limitations and introductory Computer Science to cohorts of 15–25 students, leading weekly sections and 1:1 tutoring focused on algorithmic problem solving and code correctness.

SKILLS AND INTERESTS

Skills: TypeScript, React, Terraform, AWS, MySQL, Node.js, Agentic AI, Mathematics

Interests: Chess, Weightlifting, 3D Printing, Poker, Tennis, Minesweeper