Landon Moceri

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Personal Statement

I am passionate about, experienced in, and talented at developing complex multithreaded state machines. Specifically, I am interested in working on operating systems because they are the foundation of all computing in our world. I aspire to create reliable and robust systems that toe the line between software and hardware. The challenges that come from not only implementing a working multithreaded state machine but also from making it scalable and performant are incredibly fascinating to me. I believe that systems development should be held to a high standard, and I want to leverage my experience and passion in the field to make a meaningful impact on the world.

Education

Stanford University | Stanford, CA
B.S. Computer Science | 06/2029

Menlo School | Atherton, CA
High School Diploma | 06/2025

Skills

Concurrency and Synchronization, Operating Systems Design, Performance Testing and Debugging, C and C++ Programming, Object Oriented Programming, Python, Data Analysis, Java

Projects

All project code can be found at https://github.com/ltmcoding

VM – Multithreaded Virtual Memory Manager

- Built a multithreaded memory manager from scratch using Windows APIs, with guidance from Microsoft Technical Fellow Landy Wang.
- Designed a custom page table, handled page faults, and implemented aging, trimming, and modified writing threads.
- Managed a page file, all with thread-safe, high-performance synchronization.

Boids – 3D Interactive Flocking Simulation with Raylib

- Developing a multithreaded 3D boids simulation with real-time user interaction and adjustable parameters via RayGUI
- Implemented scalable flocking logic and smooth 3D rendering for intuitive visualization of flock dynamics

Builder – LEGO Brick Classifier with Live Video Recognition

- Built a real-time LEGO brick detector using a custom CNN and OpenCV, trained on 2,800+ labeled images across 12 color classes
- Engineered a live-inference pipeline with color clustering, dynamic overlays, and interactive debugging tools

Experiences

State Machines Seminar | Remote
Teaching Assistant | 06/2024 - 08/2024

- Co-taught a seminar on multithreaded memory management with mentor Landy Wang for Dartmouth students
- Created lesson materials, led instruction, and supported students with debugging and project implementation

Menlo School | Atherton, CA
Operating Systems Course Co-Creator | 01/2025 - 06/2025

- Helped design logistics, structure, and curriculum for a new advanced OS course
- Set up machines and dev environments for hands-on work in C and Windows
- Mentored the faculty with weekly sessions on core OS concepts
- Raised awareness about the course, leading to successful enrollment and approval