

# Martín Stier

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## EDUCATION

### University of Michigan, College of Engineering

Expected Graduation: *Apr. 2026*

*B.S.E Computer Science; Minors: Complex Systems, International Studies*

- **GPA:** 3.927 | **Awards:** Dean's List (6×), University Honors (6×), James B. Angell Scholar
- **Activites:** Engineering Global Leadership (Volunteer Site Lead), Les Voyageurs (Backpacking Trip Lead), Michigan Backpacking Club (Backpacking Trip Lead), Michigan Research & Discovery Scholars
- **Relevant Coursework:** Data Structures & Algorithms, Database Systems, Web Systems, Computer Security, Theory of Computation, Statistics & Data Analysis, Linear Algebra, Computer Organization, Operating Systems

## EXPERIENCE

### Center for Healthcare Engineering and Patient Safety

Ann Arbor, MI

*Software Engineering Intern*

*May 2025 – present*

- Revamped hospital staffing tool to streamline scheduling & management of 1,000+ staff at multiple hospitals.
- Designed, normalized, & implemented a relational database, enabling fast, reliable access to over 50,000+ records.
- Refactored over 5,000 lines of legacy VBA macros into SQL queries, reducing processing times by 75%.

### PromethistAI

Prague, CZ

*AI Intern*

*Jan. 2025 – May 2025*

- Developed LLM-as-a-judge framework; leveraged OpenAI/Claude APIs for real-time monitoring of AI counselors.
- Queried & processed 100,000+ conversation logs via Elasticsearch, storing results for downstream analysis.
- Benchmarked LLMs & prompts; revealed GPT-4.1 is 25% more faithful to human evaluations than competitors.

### University of Michigan Physics Department

Ann Arbor, MI

*Teaching Assistant, PHYSICS 240: Electricity and Magnetism*

*Aug. 2024 – Dec. 2024*

- Supported student learning in core physics course of 1,000+ students by holding office hours, monitoring online class discussions (Piazza), & hosting exam review sessions.
- Taught twice-weekly studio sessions, reviewing lecture content & guiding students through practice problems.

### Institute for Social Research

Ann Arbor, MI

*Undergraduate Researcher*

*Sept. 2023 – Aug. 2024*

- Led novel analysis of urban land use & substance vulnerability using federal datasets (e.g. NANDA, US Census).
- Processed & analyzed large-scale geospatial & demographic data in R using tidyverse, sf, tigris, & dplyr to derive actionable insights for health & planning policy.

## PROJECTS

### MapReduce Framework | *Python, Sockets, Multithreading, Git, AWS*

*Fall 2025*

- Built MapReduce framework capable of executing distributed jobs across multiple worker processes.
- Designed Manager & Worker modules communicating over TCP/UDP sockets for job coordination & fault recovery.
- Implemented worker registration, task assignment, heartbeats, & fault tolerance to redistribute failed tasks.

### Social Media Platform | *React.js, SQL, REST API, Jinja2, Flask, Git, AWS*

*Fall 2025*

- Developed a full-stack social media platform via Flask that queries SQL databases to populate Jinja HTML templates & update databases upon account/post actions; utilized session cookies/hashing for verification.
- Enabled dynamic likes, comments, & infinite scrolling with React components & HTTP request methods.
- Utilized JSON-based REST API architecture; deployed to AWS EC2 instance.

### PeteCode | *React, FastAPI, Subapase, GroqCloud, ElevenLabsAPI, TypeScript, Git*

*Fall 2024*

- Built full-stack AI-powered platform using React & FastAPI to provide coaching for LeetCode problems
- Integrated API responses from GroqCloud & ElevenLabs to generate written & spoken content

### Piazza Machine Learning Classifier | *C++, Naïve Bayes Classifier, Git*

*Spring 2023*

- Developed machine learning classifier in C++, leveraging natural language processing techniques to predict topics from posts on online forums; achieved 90% accuracy

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, Java, C/C++, JavaScript, TypeScript, R, HTML/CSS, VBA

**Technologies/Tools:** Git, React, REST API, Docker, VS Code, AWS, Power BI, Excel, LaTeX, Figma, Vim

**Languages:** English (Native), Spanish (Native), French (Proficient)