Jonah Pflaster

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Education

Tufts University, Medford, MA *Expected May 2027 | GPA: 3.8*
B.S. in Computer Engineering | Minor in Mathematics

Experience

Watershed Ventures, AI Software Engineering Intern *New York, NY (Hybrid)*
May 2025 – Present | Venture Capital

- Developing a **multi-agent AI system** to enrich firm databases, automate CRM workflows, and generate investment reports
- Built agents for company discovery, enrichment, and evaluation using Python, SQL, and Supabase
- Automated research pipelines to streamline data collection, analysis, and reporting

SoundSense, LLC, Engineering Intern *Wainscott, NY*
Jun 2024 – Aug 2024 | Acoustical Engineering

- Performed data analysis and calculations for acoustical engineering field studies
- Contributed to engineering reports and client proposals
- Supported modeling and measurements using Excel, QuickBase, and SketchUp

Tufts University, Teaching Assistant - CS 11 *Medford, MA*
Sep 2025 – Present | Teaching & Academic Support

- Lead lab sections, office hours, and Piazza Q&A for 100+ students
- Grade assignments and exams with feedback on logic, style, and debugging practices

Engineers Without Borders, Technical Lead - Data Analytics and Design *Medford, MA*
Aug 2024 – May 2025 | Humanitarian Engineering

- Led a 10–20 member subteam designing a real-time water catchment monitoring system for a community in Malawi
- Developed **Arduino-based sensing** and analysis to detect tank failures and increase reliability
- Integrated hardware/software **data pipelines** for calibration and reporting

Featured Projects

LEGv8 64-bit ARM CPU *Project Page*
VHDL, ARM LEGv8 ISA, GHDL, GTKWave

- Designed and implemented a complete **64-bit ARM LEGv8 processor**, progressing from a single-cycle design to a 5-stage pipelined architecture
- Implemented full datapath and control logic supporting arithmetic, immediate, load/store, and branch instructions
- Built **data forwarding** and **hazard detection** logic to resolve pipeline dependencies and minimize stalls
- Verified correctness using GHDL simulation and GTKWave waveform analysis at the clock-cycle level

Multi-Agent AI System *Project Page*
Python, PostgreSQL, AWS, Gemini, LangGraph, Supabase

- Designed and built a **multi-agent AI system** from scratch, with modular agent orchestration, custom tools, and human-in-the-loop workflows
- Deployed on an **AWS EC2** instance and built an internal dashboard for real-time interaction, monitoring, and visualization
- Implemented agents for retrieval, enrichment, scoring, data interaction, and reporting, enabling continuous data enrichment and streamlined investment decision-making

Student Sync *studentsync.org*
Next.js, TypeScript, Supabase, OAuth 2.0, Gemini

- Built an AI-powered student platform integrating Canvas, Google Calendar, Gmail, and Drive
- Supports students across 7000+ institutions with automated academic data synchronization

HandJam *Project Page*
Python, Tensorflow, Embedded ML, STM32

- Created a gesture-controlled musical instrument using **computer vision** to recognize ASL hand signals
- Deployed real-time ML inference on an STM32 NUCLEO-L432KC microcontroller
- Trained on 2000 ASL number images; achieved 90–100% accuracy under controlled conditions

Technical Skills

Languages: C, C++, Python, TypeScript, SQL, VHDL, SystemVerilog
Frameworks & Tools: AWS, GCP, Git, React, Next.js, Node.js, Supabase, MongoDB
Hardware: Embedded Systems, Arduino, Raspberry Pi, FPGA, CAD