

# Peiyuan Li

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## EDUCATION

### Brown University

*Master of Science, Computer Science*

*Providence, RI, US*

May 2026 (Expected)

- **Cumulative GPA:** 4.00/4.00

- **Relevant Coursework:** Deep Learning, Self-Supervised Learning, Computer Vision, AI Security

### University of Wisconsin-Madison

*Bachelor of Science, Computer Science and Data Science*

*Madison, WI, US*

Double Major, Sep 2020 - May 2024

- **Cumulative GPA:** 3.73/4.00

- **Achievements:** Dean's List 2020-2023; Vice President and Director of Fundraising & Public Relations of Student Union

- **Relevant Coursework:** Data Structures, Algorithms, Machine Learning, Computer Graphics, Operating Systems, Database

## SKILLS

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

**AI / ML:** PyTorch, TensorFlow, LangChain, LangGraph, RAG, MCP, Agentic AI

**Full Stack:** React, Next.js, Spring Boot, Django, Figma, Tailwind, shaden-ui

**Infrastructure / Tools:** Docker, Kubernetes, AWS, GCP, Git, CI/CD, Redis, RabbitMQ, PostgreSQL, MySQL

## WORK EXPERIENCE

### Greensand AI

*Software Engineer Intern (Agentic AI)*

*Remote, US*

Oct 2025 - Jan 2026

- Orchestrated the core ingestion infrastructure on GCP with TypeScript and MinerU, building a robust pipeline that parses complex PDF layouts into clean markdown, which enabled downstream LLM analysis of legal contracts
- Engineered a Hybrid RAG system (Vector + Keyword) for indexing **800+** legal statutes and internal playbooks; optimized retrieval precision by enforcing citation-backed generation, reducing unverified claims by **~12%** in internal benchmarks.
- Developed a **multi-step reasoning** agent that automates contract auditing, reducing average review time per document from **45 mins to 6 mins (87% reduction)** by providing pre-generated citations for human auditors.

### Huawei Technologies Co., Ltd

*Software Engineer Intern (AI Infrastructure)*

*Shenzhen, GuangDong, China*

Jul 2025 - Sep 2025

- Implemented the DMA subsystem for the Unified Bus protocol by engineering a high-throughput receive-queue mechanism, improved data transfer rates by **20%** in staging benchmarks, validating scalability for AI training clusters (**900+ nodes**).
- Revamped the distributed integration testing framework for mission-critical firmware; increased critical-path code coverage from **93% to 98.9%** by removing 40% of redundant mocks, reducing regression defect rates by **~30%**.

### Epic Systems Corporation

*Software Engineer Co-op*

*Madison, WI, US*

Feb 2024 - May 2024

- Prototyped a Medical Simplification Service for the MyChart backend, utilizing RAG to map complex clinical standards (SNOMED CT / ICD-10) and dense clinical narratives to **patient-friendly** explanations, which enabled successful internal pilot testing of the new workflow
- Validated the pipeline via controlled user studies, demonstrating a **12% increase in comprehension scores** and a projected **20% reduction in support resolution time** by isolating and rewriting high-frequency jargon.

### Shenzhen Wande Software Co., Ltd.

*Software Engineer Intern*

*Shenzhen, GuangDong, China*

May 2021 - Sep 2021

- Engineered a project management backend using **Spring Boot** and **RabbitMQ**; implemented asynchronous task processing for notifications and optimized database performance via **Redis** caching, **reducing API latency by ~30%**.

## PROJECTS

### AI Learning Platform | <https://ai-learning-pink.vercel.app/>

Dec 2025 - Present

- **Tech Stack:** Next.js, SpringBoot, PostgreSQL
- Developed an educational SaaS platform featuring a custom **AST-based rendering engine** that transforms Jupyter Notebooks and Markdown into interactive, media-rich web tutorials with native formula and code support.

### AI-Powered Football Analytics Platform | <https://football-insight.vercel.app/>

Jul 2025 - Present

- **Tech Stack:** Next.js, Python, Pandas, LangChain, Supabase
- Designed an end-to-end sports intelligence system that aggregates **granular event-level match data (passing, pressing, shots)** across 4 English Premier League seasons, leverages GenAI to generate tactical heatmaps and predictive insights, visualizing on dashboards.

### Optical Music Recognition System | <https://yolo-omr.vercel.app/>

Mar 2025 - May 2025

- **Tech Stack:** React, Gradio, PyTorch, Computer Vision
- Spearheaded an OMR pipeline using a fine-tuned YOLOv8 model (mAP > 0.92) to reconstruct musical symbols into playable MIDI sequences for real-time web playback.