

Peiyuan Li

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EDUCATION

Brown University

M.S. in Computer Science

Providence, RI, US

Expected Graduation May 2026

- **GPA:** 4.00 / 4.00

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

University of Wisconsin-Madison

B.S. in Computer Science and Data Science

Madison, WI, US

Double Major, Sep. 2020 - May 2024

- **GPA:** 3.73 / 4.00, Honors: Dean's List (2020, 2021, 2022, 2023)

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

WORK EXPERIENCE

Huawei Technologies Co., Ltd (<https://www.huawei.com/en/>)

Shenzhen, Guangdong, China

AI Infrastructure Engineer Intern, Unified Bus Dev Team

July 2025 - Sep. 2025

- Developed the **receive-queue** module for **Clan-DMA**, a DMA feature within Huawei's [Unified Bus](#) protocol, enabling **multi-node concurrent DMA** transfers instead of traditional one-to-one communication, and supporting scalable data exchange across **900+** devices for large-scale AI training and datacenter workloads.
- Constructed an **integration testing** framework for Unified Bus protocol across multi-component systems with extensive initialization and monitoring requirements, elevating code coverage **from 93% to 98.9%** for critical release validation.
- Architected a **contract testing** framework for open-source Unified Bus orchestration layer, enabling resource developers to validate end-to-end integration from public API to base methods, eliminating 40% of high-level stubs and decreasing integration defects in production by **30%**.
- Built a **query interface** allowing onboarded customers to retrieve comprehensive resource information through a single API, reducing resource discovery time to sub-second responses and decreasing customer support requests by **22%**.

Epic Systems Corporation (<https://www.epic.com/>)

Madison, Wisconsin, US

Software Engineer Co-op

Feb. 2024 - Apr. 2024

- Designed a **retrieval-augmented generation (RAG)** system for Epic's leading medical AI chatbot [MyChart](#), using LangChain and Epic's clinical vocabulary to automatically map complex medical terminology to patient-friendly explanations, improving communication satisfaction rate by **12%**.
- Implemented an intelligent **keyword detection and context injection pipeline** that identifies medical jargon in real-time conversations and retrieves relevant plain-language explanations from Epic's knowledge base, enabling dynamic AI-powered translation of clinical terms during patient interactions.

Shenzhen Wande Software Co., Ltd.

Shenzhen, Guangdong, China

Software Engineer Intern

May 2021 - Sep. 2021

- Engineered **modular software components** with a comprehensive testing strategy across multiple client projects, achieving **100% compliance** with specification requirements.
- Redesigned **user interface architecture** for 9 legacy applications by analyzing technical bottlenecks and leading cross-functional collaboration, reducing interface complexity by **23%**.
- Deployed company's **Project Management System** using Java/Spring Boot micro-services with Nginx load balancing and SQL Server backend, managing stakeholder communications and contract negotiations for seamless project execution.

PROJECT EXPERIENCE

S2D2: A Self-Supervised Dataset Distillation Framework for Foundation Models

Nov. 2024 - Feb. 2025

- Developed the unsupervised dataset distillation framework combining self-supervised learning (DINOv2/CLIP) with hierarchical clustering and soft-label optimization, enabling model-agnostic compression that distills ImageNet-1K to 1,000-10,000 synthetic images while maintaining generalization performance across foundation models.
- Implemented a single-stage Gaussian optimization pipeline compatible with Vision Transformers and CNNs, achieving up to +3.8% accuracy improvement on CIFAR-10 and +4.01% mAP on image retrieval tasks while reducing training time by 70% compared to existing methods through 6-hour synthesis on a single A6000 GPU.

SKILLS

Languages: Python, Java, C, Linux, SQL, R, HTML, CSS, JavaScript

Technologies: Git, AWS, Spring Boot, MySQL, React, Pytorch, TensorFlow, LangChain, Agile, JIRA