Peiyuan Li

NewHaven, CT, US | +1 (623)-273-4679 | peiyuanli3627@outlook.com | Peiyuan | pli233

EDUCATION

Brown University *Providence, RI, US*
Master of Science in Computer Science Expected Graduation May 2026
- **GPA:** 4.00 / 4.00
- **Relevant Courseworks:** Deep Learning, Self-Supervised Learning, Computer Vision, AI Security

University of Wisconsin - Madison *Madison, WI, US*
Bachelor of Science in Computer Sciences and Data Science Double Major, Sep. 2020 - May 2024
- **GPA:** 3.73 / 4.00, Honors: Dean's List (2020, 2021, 2022, 2023)
- Vice President and Director of Fundraising & Public Relations of Student Union.
- **Relevant Courseworks:** Data Structures, Algorithms, Machine Learning, Computer Graphics, Database, OS

SKILLS

Languages: Python, Java, C, R, SQL, HTML, CSS, JavaScript, GO
Frameworks: PyTorch, TensorFlow, Django, Spring, React, LangChain, MyBatis
Tools: Git, Linux/Unix, AWS, Maven, RabbitMQ, Redis, MySQL, JIRA, RAG, MCP

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 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 comprehensive **integration and contract testing frameworks** for the Unified Bus protocol and orchestration layer, raising critical release code coverage from **93% to 98.9%**, eliminating **40%** of high-level stubs, and reducing production integration defects by **30%**.
- Built a **query interface** with debugfs, 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
- Developed an construction project management system using Spring Boot, MyBatis, Redis, JDBC, RabbitMQ, and Maven, optimizing SQL architecture and improving front-end integration efficiency.

PROJECT EXPERIENCE

S2D2: A Self-Supervised Dataset Distillation Framework for Foundation Models Nov. 2024 - Feb. 2025
- Developed an 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.

Music OCR System Based on ViT-YOLO Architecture Sep. 2024 - Dec. 2024
- Developed an OCR system that converts sheet music images into playable audio by integrating YOLOs efficient local object detection with Vision Transformers global context modeling, achieving 98% accuracy on the **DeepScores v2** dataset. The system reconstructs audio through graph-based analysis and timefrequency mapping, enabling the generation of high-fidelity audio from a single sheet music image in 2 seconds.