

Baowen Liu

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EDUCATION

The Ohio State University <i>B.S. in Computer Science and Engineering, Minor in Math — GPA: 3.965/4.0 (Top 1%)</i>	Columbus, OH
	Aug. 2024 – May 2028

EXPERIENCE

Undergraduate Teaching Assistant — ENGR 1181 & Open Lab <i>The Ohio State University College of Engineering</i>	Jan. 2026 – Present
<ul style="list-style-type: none">Work in teaching team to help about 70 students in both class and lab settingsSupport students in mastering 3D visualization, CAD softwareAssist students and professors during lectures, teaching MATLAB and programming concepts, grading assignments, and performing training sessions.	<i>Columbus, OH</i>
Technical Intern <i>Nanoshape, Inc.</i>	Oct. 2025 – Jan. 2026
<ul style="list-style-type: none">Built Python/PyTorch tools supporting Nanoshape's AI simulation frameworkImproved multi-agent coordination stability by 10–15% through algorithm refinementImplemented simulation modules and validated performance over 100+ automated runs	<i>Columbus, OH</i>
Software Engineer <i>SPIC Integrated Smart Energy Co., Ltd.</i>	May 2025 – July 2025
<ul style="list-style-type: none">Compiled a 40-page system architecture document standardizing module logic and data flows across 6 subsystems in the virtual power plant (VPP) platform.Operated SQL databases by creating tables, managing telemetry/status data, and handling dispatch recordsBuilt Java components to read/write/validate database records for core system modules	<i>Beijing, China</i>

PROJECTS

User Center System <i>React, AntD Pro, Spring Boot, MyBatis-Plus, MySQL, Docker</i>	May 2025 – Dec. 2025
<ul style="list-style-type: none">Developed a production-ready full-stack user system (login, registration, user mgmt)Implemented backend APIs and database models with Spring Boot, MyBatis-Plus, MySQLBuilt frontend pages with React + AntD Pro, including validation and API integrationSupported deployment using Linux + Docker + Nginx (reverse proxy, CORS, multi-env)	
AI Relationship Agent System <i>Spring AI, LangChain4j, PgVector, MCP, ReAct Agent</i>	Dec. 2025 – Present
<ul style="list-style-type: none">Developed an AI-powered relationship assistant supporting multi-turn conversations, memory retention, RAG-based knowledge retrieval, and tool calling for tasks such as location search and date-plan generation.Implemented a ReAct-style autonomous planning agent, capable of web searching, content extraction, file generation, and executing multi-step workflows.Built vector-based semantic search using PgVector and optimized document chunking, retrieval, and reranking to improve answer relevanceIntegrated Spring AI features—including ChatClient, Advisors, structured outputs, and persistent memory—to enhance reasoning quality and system reliabilityDeployed backend services using Docker + Serverless platforms, enabling scalable API access for AI chat, agent execution, and knowledge retrieval	

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL (MySQL/PostgreSQL), HTML/CSS

Frameworks: Spring Boot, Spring AI, LangChain4j, MyBatis-Plus, React, Ant Design Pro

Developer Tools: Docker, Nginx, Git/GitHub, IntelliJ IDEA, VS Code, Serverless Platforms

Libraries: PgVector, RAG Components, Umi Request, PyTorch, pandas, NumPy