

Cassandra (Yiming) Wang (she/her)

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EDUCATION

Northeastern University (Seattle)

Master of Science in Computer Software Engineering, GPA: 3.86/4.00

Seattle, WA

Expected Dec 2026

Coursework: Program Structure and Algorithms, Web Design and User Experience Engineering, Python for Information Systems, Application Engineering and Development, Data Management and Database Design

Johns Hopkins University

Master of Science in Educational Technology, GPA: 3.91/4.00

Baltimore, MD

Aug 2023

University of Nottingham

Bachelor of Arts in International Communications Studies

Nottingham, UK

Jul 2022

SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS, SQL, LaTeX, Shell, C++, Go

Frameworks & Libraries: Spring Boot, React.js, Next.js, Vue.js, Node.js, Express.js, Unity, Pandas, scikit-learn, Django, Flask

Databases & Cloud: MySQL, PostgreSQL, AWS (SageMaker, EC2, S3, RDS, Lambda), Cloudflare, Git, Docker, Kubernetes

Development Tools: GitHub Actions, Jest, JUnit, Postman, VS Code, IntelliJ IDEA, Linux, CI/CD, Figma

PROJECTS

DeepForth AI: Full-Stack AI-Powered SaaS Platform | deepforth.com

Oct 2024 – May 2025

- Reduced **15% operational costs** by developing end-to-end full-stack **multi-LLM agents** for **intelligent model selection**
- Optimized across **multiple LLMs** through **dynamic routing** based on **query type** and **performance metrics**
- Implemented **Chain-of-Thought prompting** and **LangChain-based RAG pipeline** enhancing **response accuracy**
- Developed pipeline observability with **Langfuse** and **LlamaIndex**, instrumenting agent steps, tool, and model invocations
- Increased **user engagement by 20%** by designing in **Figma** and developing data dashboard using **React.js/TypeScript**
- Built **microservices architecture** using **AWS CDK** with **ECS, S3, RDS** implementing **JWT authentication**
- Developed **RESTful APIs** with **Node.js** and **Express.js** through **iterative Scrum development** with **Jest testing**
- Integrated **Docker containerization** in **GitHub Actions CI/CD pipeline** ensuring **automated deployment** and **scalability**

Full-Stack Long-Polling Online Chat Application

Jan 2025 – Apr 2025

- Built full-stack chat platform supporting 50+ concurrent users with **React.js SPA** and **Express.js** backend
- Implemented messaging through **polling architecture** and comprehensive session management with **JWT authentication**
- Achieved **96% message delivery reliability** designing **RESTful API** with 5+ **HTTP methods** for **messaging features**
- Implemented **inheritance, encapsulation, and polymorphism** in User/Message class hierarchies with state management
- Leveraged **cross-cultural communication insights** designing **i18n interface components** and **context-aware filtering**

Full-Stack Multi-Party Healthcare Communication System

Apr 2024 – Jul 2024

- Secured communication for 5 distinct healthcare roles building **scalable role-based authentication** using **Spring Security**
- Implemented **dynamic Java Swing UI** with **RBAC component rendering** and **role-specific data access patterns**
- Achieved **30% faster query performance** developing **medical data tracker** with **Spring Boot** and **MySQL schemas**
- Optimized **high-volume transactional processing** through **indexing, normalization, and database design patterns**

EXPERIENCE

Johns Hopkins University

Instructional Design Assistant

Baltimore, MD

Oct 2022 – Jun 2023

- Designed **data pipeline** with **Python, Pandas, and scikit-learn** analyzing **400,000+ learner interactions**
- Developed **machine learning predictive models** identifying **at-risk students** with **90% recall (10-fold CV)**
- Built **2 AI chatbots** using **OpenAI API** with **custom prompt engineering** implementing **multi-turn dialogue**
- Provided **context preservation** and **fallback handling** for **edge cases** with **personalized learning support**

Ogilvy Hong Kong

Marketing & Advertising Intern

Hong Kong SAR, China

Jun 2021 – Sep 2021

- Increased **campaign conversion rates** by 20% implementing **customer segmentation** using **K-Means clustering/PCA**
- Analyzed **50,000+ user profiles** bridging **analytical programming skills** with **marketing domain expertise**
- Reduced **manual processing time** by 40% automating **consumer data analysis pipeline** using **Python**
- Implemented **ETL workflows** and **cron jobs** for **automated reporting** across **3 international regions**

PUBLICATIONS

Li, H., Fang, Y., Zhang, S., Lee, S. M., Wang, Y., Trexler, M., & Botelho, A. F. (2025). ARCHED: A human-centered framework for transparent, responsible, and collaborative AI-assisted instructional design. *iRAISE @ AAAI*, PMLR 273:94-104, 2025.