Weijia Xiao

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Availability: January–August 2025, Open to Relocation

EDUCATION

Northeastern University, Khoury College of Computer Sciences — Expected Graduation: May 2026
Bachelor of Science in Computer Science, Concentration in AI | **GPA: 4.0 / 4.0**
Courses: Object-Oriented Design, Engineering LLM-integrated systems, Theory of Computation, Database Design, Computer Systems
Master/PhD Courses: Algorithms and Data Structure, Artificial Intelligence Foundations, Machine Learning with Small Data

SKILLS

Languages: Python (6 yrs), Java (4 yrs), C/C++ (2 yrs), Javascript (2 yrs), HTML, CSS, Go, SQL, C#, R, Racket
Machine Learning: PyTorch, Keras, Sklearn, BeautifulSoup, Hugging Face, Vector Database, Retrieval-Augmented Generation
Software Development: Next.js, Vue.js, Linux, Git, MySQL Workbench, Firebase, Unity, Maya, Figma, Vercel, Redis, React

EXPERIENCE

Software Engineering Fellow [*Next.js, Firebase, LLM API, Go, MySQL, RAG, Vector Database*] — *Jul 2024–Sep 2024*
Headstarter — *Remote*
- Developed an inventory management system with real-time CRUD operations, search functionality, and photo previews; **adapted quickly to all-new full-stack tech stacks** (Material UI, Next.js, React, Firebase, Vercel) **enabling efficient project delivery in a week;** received **>5k** usages
- Deployed a **GenAI chatbot platform** where user can create and customize their unique chatbots; incorporated CI/CD deployment practices
- Crafted a **GenAI-powered SaaS** product generating flashcards on users' input topics using Llama 3.1 API; integrated a paywall using Stripe API
- Built an **interactive support agent** with a custom **RAG pipeline,** responding precisely to users' queries using the knowledge base

Software Engineer, Game Developer [*C#, Unity, Maya* | *Java, Java Swing* | *HTML, CSS, Javascript, Vue.js*] — *Feb 2023–Present*
- Led the development of five 2D/3D games in Unity; **taking flexible roles** (team leader, lead coder, chief graphic and UI/UX designer, 3D modeler) **to complement teammates' strengths for maximizing the outcome as a team**; **Led a team to win Top 11 in a 10,000-attendee game jam**
- Programmed 4 games in Java using MVC design and AI algorithms (BFS, DFS, A*, Minimax, Dijkstra); recreated 3 as browser games using Vue.js

Machine Learning Researcher [*Python, PyTorch, Keras, Sklearn*] — *Jul 2019–Present*
- Published 1 academic paper in a JCR-Q1(top 25%) peer-reviewed journal, with a total of **2 preprints and 2 journal papers**; **Got 47 citations**
- **Proposed a novel snapshot ensemble DNN** (Deep Neural Network), boosted 5 metrics by **1~3%** from baseline DNN for essential gene prediction; experimented and outperformed **GAT** (Graph Attention Networks), **Random Forest**, **AdaBoost**, and **SVM** (Support Vector Machine) up to **15%**
- Applied and currently improving **Diffusion** model for segmenting medical images, reached > 80% mIoU accuracy

PROJECTS

CardFlip AI-Powered Flashcard SaaS Platform [*Llama 3.1 API, Next.js, React, Firebase, Vercel, Stripe*] — *Aug 2024*
- Managed the building of a polished platform where user can generate Q&A flashcards on the topic of their choice and save them to review later
- Utilized **Next.js** for front and back end, **Firebase** for storing data, **Clerk** for user authentication, and **Stripe** for paywall and pricing plans
- Connected with and prompt-engineered the **Llama 3.1 LLM** to generate knowledge Q&A style flashcard content based on the user's input topic

DevOrbit Chatbot Platform [*Llama 3.1 API, Next.js, React, Firebase, Vercel*] — *Aug 2024*
- Led the design and development of the platform, supporting users to create and customize chatbots, enabling **fast deployment within a week**
- Prompt-engineered the **Llama 3.1 LLM**, guiding the same model to respond differently according to users' customization for each bot
- Coded in full stack with **Next.js** and Firebase for database and authentication; deployed with **CI/CD** practices for iterative update and deployment

Droplet of Life [*C#, Unity, Pixel Studio*] — *May 2024*
- Led a team of 3 to build a novel-concept 2D pixel-styled game, where players control bamboos to transfer and enlarge a water droplet to save lives; coded game logic and mechanisms in C#; designed game graphics style and mechanics; created game assets by drawing and animating pixel art
- Ranked **Top 11** in game mechanics design among **700+** submitted games and scored a top 5-ranked judge rating with the highest score in both visual and audio aspects in Pixel Game Jam 2024 (**~10,000** professional & student attendees)

Reversi Game [*Java, Java Swing*] — *Oct–Dec 2023*
- Built a 2-player Reversi game strictly using **loose-coupling MVC** (Model–View–Controller) design in Java to ensure flexibility and modularity
- **Minimized code duplication** utilizing inheritance and composition, with various design patterns (Builder, Adapter, Observer)
- Provided flexible customization of board shape, board size, and player type choices through command line configuration
- Formulated 3 strategized AI players that automatically play the game following the in-built winning logic (Greedy, Heuristic, Minimax)

Web & Java Puzzle Games [*Vue.js, HTML, CSS, Javascript, Java*] — *Feb–Aug 2023*
- Designed a randomized maze game in Java, accepts manual playing and automatic path searching using **BFS**, **DFS**, and **A*** search algorithms
- Implemented a color-unifying and a sequence memorization games in Java, fully functional and correct, showing a **strong foundation in Java**
- Created browser games for all 3 puzzle games, learned web development while coding, finished each game recreation from scratch **within 5 days**

AWARDS

7 Hackathon / Competition Wins — *Aug 2020–Present*
- Won all hackathons attended; served as team leader, product designer and manager, and lead coder; managed clear task division and timeline
- Excelled at both ideation and coding; proposed novel solutions: wildfire real-time alert using machine learning, coronavirus campus tracker, etc.

TikTok x Headstarter Hackathon Top 3 Finalist — *Sep 2024*
- Managed the development of a social media platform, using **Next.js** for the frontend, with **Go**, **Redis**, and **MySQL** database for the backend
- Designed a **recommending algorithm** for ranking posts, and an innovative product feature (a tag-adding trick) endorsed by audiences during demo
- Started with 0 experience in Go and Redis, quickly adapted and successfully built a functioning backend fully written in Go within **43 hours**

Northeastern Computer Systems Concurrency Programming Star — *Apr 2024*
- Utilized solid data structure knowledge to implement a highly performant concurrent Key-Value store/database in **Linux** using **C**
- Achieved **>300x** faster than the baseline; speed ranked **2nd** among 200+ students; got a perfect score in **high-concurrency** CRUD tests