Fei Xue

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EDUCATION

Northeastern University | Boston, MA   **Expected Jul 2026**
Master of Science, Computer Software Engineering   GPA: 3.5
Guilin University of Electronic Technology | Guilin, China   **Jul 2023**
Bachelor of Laws (LL.B.), Intellectual Property Law

SKILLS

Backend Development: Node.js (Express.js), Python (FastAPI), Java (Spring Boot), RESTful APIs, JWT, RBAC, Microservices Architecture, Redis, Kafka

Frontend Development: React.js, Redux, Vite.js, Tailwind CSS, Responsive Web Design, ARIA, WCAG

Database & Cloud: MySQL (Sharding & Read/Write Separation), MongoDB, Redis, AWS (ECS, Lambda, SQS, Route 53, EC2, S3, RDS), Docker

DevOps & Automation: Git, GitHub Actions (CI/CD), Puppeteer, Distributed Locking, Load Balancing

PROFESSIONAL EXPERIENCE

Northeastern University | Boston, MA | *Research Assistant*   **January 2025 – Present**
Tech Stack: *Node.js, Express.js, React.js, MySQL, Redis, Docker, AWS (ECS, SQS), LLM Integration*

- Developed and maintained a distributed anonymous reporting platform, supporting 10,000+ daily concurrent submissions, ensuring strict data privacy and end-to-end encryption.
- Implemented user authentication (JWT) and RBAC to manage multi-role access and enforce data privacy policies.
- Improved system throughput by 50% by deploying microservices across AWS ECS instances with Redis caching and AWS SQS asynchronous task processing.
- Built an automated Puppeteer web scraper to streamline external data collection, reducing manual effort by 70%.
- Automated CI/CD pipelines with GitHub Actions and Docker, enabling zero-downtime deployments and reducing release cycles by 40%.

China Iron Tower Company Ltd | Jiaozuo, China | *General Department Intern*   **Jun 2021 – Dec 2021**
Tech Stack: *Java, Spring Boot, MySQL, Role-Based Access Control (RBAC), Redis*

- Built and deployed a contract management system with Spring Boot and MySQL, reducing approval workflow time by 30% and improving data consistency.
- Implemented RBAC-based access control and integrated Redis caching to secure and accelerate access to over 200 classified legal documents.
- Optimized MySQL database performance through indexing and query tuning, decreasing report generation time by 65%.
- Automated document review and retrieval workflows, increasing processing efficiency by 40%.

PROJECTS

Social Wave | Live Demo | *Backend Developer*
Tech Stack: Node.js, Express.js, MySQL, React.js, JWT, AWS Lambda, AWS Route 53, Redis

- Designed and implemented MySQL database sharding strategy and read/write separation, increasing data partitioning efficiency and ensuring system availability for daily active users.
- Integrated OpenAI GPT-4 and DALL·E 3 to automate post summarization and generate dynamic cover images, enhancing user engagement and content quality.
- Split core modules (User, Post, Comment) into independent services, deployed on AWS Lambda, with AWS Route 53 managing traffic routing and load balancing.
- Optimized post interactions under high concurrency using Redis caching and distributed locking mechanisms.
- Scaled MySQL with read/write separation and sharding to support the increasing volume of user and post records.

Find A Fur Baby | Live Demo **|** *Full Stack Developer*
Tech Stack: Python, FastAPI, MongoDB, AWS S3, React.js, Vite.js, Tailwind CSS

- Built a pet adoption platform with FastAPI and MongoDB, enabling user registration, pet listings, and adoption applications.
- Implemented JWT authentication and role-based access control to secure user management.
- Designed and developed RESTful APIs for seamless frontend-backend integration, integrated AWS S3 for scalable and secure image storage.
- Created a responsive and accessible frontend using React.js and Tailwind CSS.