Lelin Zheng (She/Her)

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EDUCATION

Northeastern University   Sep 2024 – May 2027
M.S. in Computer Science, GPA: 4.0 / 4.0   Seattle, WA
Relevant Coursework:
Object-Oriented Design, Computer Systems, Algorithms, Database Management Systems, Cloud Computing (AWS)

University of Alberta
B.Ed. in Education with Distinction, GPA: 3.8 / 4.0   Sep 2020 – May 2022
M.S. in Materials Engineering, GPA: 4.0 / 4.0   Sep 2017 – May 2019
                                                                                        Edmonton, AB

TECHNICAL KNOWLEDGE

- **Languages:** Python, Java, C, JavaScript, HTML/CSS, TypeScript, SQL
- **Tools & Frameworks:** Spring Boot 3, Spring Cloud (Gateway, Eureka, Config), Resilience4j, Hibernate (JPA), Angular 18, React, Node.js, Express.js , Sails.js, EJS, Bootstrap, Flask, Django, PyQt6, Kubernetes, Linux/Unix, Git
- **Testing & Observability:** JUnit, Jest, Supertest , WireMock, Grafana Stack
- **Databases & Services:** MySQL, SQLite, MongoDB Atlas, AWS, Vercel, Render

RELEVANT WORK EXPERIENCE

Software Engineer Intern   May 2025 – Aug 2025
Jetsweat Inc.   New York, NY
- Built 10+ **RESTful APIs** to surface user-level analytics and power a white-label admin toggle, enabling 50+ corporate partners to gain insights while reducing response latency by 40% through optimized queries and connection pooling.
- Redesigned **MySQL** schema by adding an access-control column and enforcing role-based SQL queries to ensure 100% restriction of unauthorized admin access to individual video engagement data, aligning with security best practices.
- Revamped the onboarding modal with **React**, using **useState** for step control and Redux to persist authenticated user context across views, improving recommendation personalization and driving a 25% increase in content engagement.
- Enhanced the admin dashboard (**JavaScript**, **Node.js**, **EJS**, **Bootstrap**) with real-time engagement tracking and error surfacing, resolving 10+ production issues and improving internal support efficiency by 30%.

High School Computer Science Teacher   Sep 2022 – Jun 2024
Calgary Board of Education, Crescent Heights High School   Calgary, AB
- Taught Computer Science to 100+ students in grades 10 and 11, covering programming fundamentals, algorithms, procedural and functional programming, **OOP** in **Python**, and **HTML/CSS** for web development.
- Developed a **Python**-based scheduling application that efficiently organized a 10-team inter-school badminton tournament, reducing manual coordination time by over 80%.

PROJECTS

NextGen-Online-Shop: Spring Boot 3 Microservices Online Shopping Platform
- Architected four **Spring Boot 3** microservices (Product, Order, Inventory, Notification) behind **Spring Cloud Gateway** with **Eureka**, **Config Server**, and **Resilience4j**, containerized in **Docker** and deployed on **Kubernetes**, achieving 99.9% availability and improving fault tolerance.
- Implemented **Apache Kafka** for asynchronous order processing and real-time inventory updates, reducing service coupling and improving throughput by 40%; Built observability with **Prometheus**, **Grafana**, **Loki**, and **Tempo** for metrics, logs, and traces, cutting mean time to resolution by 50%.
- Validated microservices with **Testcontainers** and **WireMock**, running integration tests against ephemeral databases, Kafka clusters, and mocked APIs, boosting test coverage and reducing defect leakage by **50%**.

Qualcomm On-Device AI Hackathon: AI-Powered Narrative Connect Four (2nd Place Winner)
- Engineered a **PyQt6-based GUI** with multi-threaded event handling for a responsive and interactive **LLM-integrated** Connect Four game experience, featuring dynamic UI updates and real-time AI narration.
- Integrated **local LLM inference via Ollama (Mistral-7B)** with game logic algorithms (minimax with alpha-beta pruning), implemented speech-to-text feature using **OpenAI Whisper** increasing player-AI interaction by 75%.

Task Master: Full-Stack To-Do List
- Built and deployed a full-stack task manager app using **React**, **Node.js**, **Express**, and **MongoDB Atlas** for cloud data storage, featuring **JWT**-secured authentication, protected routes, full CRUD APIs, and production-ready testing (**Jest**/**Supertest**) and deployment (**Vercel**/**Render**).