

Yuechen Guo

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Education

University of Washington

Sep 2024-Jun 2026 (Expected)

Master of Science in Electrical Engineering

Seattle, WA

- **Relevant Coursework:** Data Structures and Algorithms, Database Systems, System and Software Tools (Linux), Mobile Applications Development (Android), Software Engineering (Java), Computer Systems Security
- **GPA:** 3.9/4.0

Sun Yat-sen University

Sep 2020-Jun 2024

Bachelor of Engineering in Electronic Information Science and Technology

Guangzhou, China

Professional Experience

Vizard.ai – Software Development Engineer Intern

Palo Alto, CA | Oct 2025 – Present

- Built a **Chrome AI extension** for internal use from 0-1 to automate UX evaluation using Prompt, Summarizer, and Writer APIs, enabling one-click usability scoring and report generation fully on-device for **privacy-safe analysis**.
- Optimize the Hybrid AI evaluation pipeline with structured DOM parsing and scoring logic refinement, aiming to achieve over **60 %** user reuse intent, **under 5 s** latency, and strong user clarity in internal tests.

Chatbook – Software Engineering Intern

Seattle, WA | Jul 2025 – Sep 2025

- Developed services as part of a 5-person team, building an enterprise **REST API** for a service appointment platform; implemented **AWS configurations** and **unit tests** to enable continuous delivery of a scalable and reliable system.
- Designed the payment module's front-end with **React** and back-end with **Django**, integrating third party payment gateway to implement secure checkout logic, and ensure **PCI DSS compliance** with minimized scope.
- Incorporated an **AWS-based** asynchronous payment pipeline with **EventBridge**, **Lambda**, and **SQS** to process third-party transactions, achieving **99.5%** success on 1,000+ daily payments with idempotent processing.
- Built an **AI voice agent** with Twilio and the **OpenAI Realtime API**, achieving under **500 ms** latency with natural barge-in and function calling, routing user queries to a supervisor agent across several call workflows.

Projects

VoiceShield: Audio Deepfake & Duress Detection System | Capstone project with BECU

BE|CU

- * Built a **FastAPI** backend on **AWS EC2** with a **JavaScript** frontend for real-time audio upload and deepfake/duress detection visualization; optimized concurrency with **async I/O** and **thread pooling**, reducing latency by **50%**.
- * Developed a duress detection pipeline with OpenSMILE feature extraction, SHAP+RFE feature selection, and an **LSTM-Random Forest ensemble**, achieving **93%** accuracy on real-world call data.

Personal Website | Next.js + Spring Boot + PostgreSQL

- * Developed a full-stack personal website with **RESTful backend services**, integrated **CI/CD pipelines** via **GitHub Actions** and **Docker**, and implemented **unit tests** achieving **70%** code coverage with focus on critical path.
- * Optimized article queries with **selective eager fetching**, **composite indexes**, and **in-memory caching**, cutting average response time from **280 ms** to **20 ms** while supporting hundreds of concurrent requests.
- * Implemented a scalable like/vote feature leveraging **Redis** and **Lua scripts** to ensure atomic operations, prevent race conditions under **high concurrency**, and reduce database load through scheduled asynchronous persistence.

Campus News Information Platform | Spring Boot + Spring Cloud + MyBatisPlus

- * Built **microservice architecture** with modules for article publishing, removal, asynchronous review, and user interactions; managed service configuration via **Nacos** and routed requests through **Spring Cloud Gateway**.
- * Implemented **JWT-based** authentication in the gateway microservice using **Spring Security**, storing user information in **ThreadLocal** within microservice interceptors to ensure unified validation and thread isolation.

Skills

- **Programming Languages:** Java, Python, C++, JavaScript, TypeScript, SQL, HTML/CSS, MATLAB
- **Frameworks & Tools:** Spring Boot, Spring Cloud, Django, Node.js, Next.js, React, Tailwind CSS, Bootstrap, MySQL, PostgreSQL, MongoDB, Redis, Git, Shell, Docker, AWS, JUnit, JMeter, Postman, Cursor IDE
- **Core Competencies:** Data Structures and Algorithms, Object-Oriented Programming (OOP), System Design
- **Languages:** English (Fluent), Chinese (Native), Japanese (Beginner)