Jerry Zhao

734-619-9185 | jerryzhaous@gmail.com | zhaojer.github.io | in/jerryzhao1729/ | github.com/zhaojer

Education

University of Michigan — Ann Arbor, MI

M.S. in Computer Science Engineering (GPA: 4.00) — *Aug. 2023 – May 2025 (Expected)*

B.S. in Computer Science, B.S. in Psychology (GPA: 3.96) — *Sept. 2019 – Apr. 2023*

Skills

Languages: C, C++, Java, Python, Go, TypeScript, JavaScript, HTML, CSS, SQL, Assembly, R
Frameworks: Spring Boot, Django, Flask, React, Next.js, Vue.js, Tailwind, Bootstrap, Pytest, JUnit, Cypress
Libraries: PyTorch, TensorFlow, NumPy, Panadas, Matplotlib, MPI, OpenMP, JDBC, jQuery, D3.js
Databases: MySQL, SQLite, Oracle SQLPlus, MongoDB, Firestore, DynamoDB, Neptune
Tools: AWS, Google Cloud (GCP), Git, GitHub Actions, Docker, Node, CMake, Maven, LLVM, CUDA, Hadoop, Jira, Figma

Work

Software Engineer — June 2024 – Present

Nouri — *Contract · Remote*

- Developed a web app (React, Python, GCP/Firebase) to streamline the journey from recipe creation to grocery shopping
- Optimized user experience by prompt engineering GPT-3.5 to generate recipes using Python & Google Cloud Functions
- Architected & integrated Authentication & Firestore/NoSQL data models, ensuring secure & efficient data management
- Deployed to Firebase Hosting & Cloud Run via a CI/CD pipeline with GitHub Actions, enhancing reliability & efficiency

Software Engineer Intern — June 2024 – Present

MoreThinks Solutions — *Internship · Remote*

- Developed a social media platform (Qwik/TypeScript, AWS) for influencers to promote their partnered products
- Built an interactive, responsive UI using Qwik & Tailwind, with advanced CSS animations to align with Figma designs
- Architected a scalable serverless backend using AWS CDK, integrating API Gateway, Lambda, and CloudFront to ensure fast, highly-available content delivery

Teaching Assistant — May 2022 – Present

University of Michigan, College of Engineering — *Part-time · Ann Arbor, MI*

- Instructed 4 graduate-level EECS courses: Human-Computer Interaction, Web Systems, Databases, Parallel Computing
- Led weekly lab sessions to engage 80+ students in doing hands-on exercises with new programming concepts & languages
- Provided targeted support during office hours to help students plan & debug code, improving grades by 40%+

Research Assistant — May. 2022 – Apr. 2023

University of Michigan, Lifelong Learning Lab — *Part-time · Ann Arbor, MI*

- Developed a web app (React, Django, MySQL) to enhance surgeons' visuospatial skills by analyzing an interactive visualization of eye-gaze data (D3.js), resulting in improved surgical performance
- Built a video-coaching platform (React, Django, SQLite) enabling efficient frame extraction via image segmentation & sketch-based fine-tuning (OpenCV, MRCNN) and quiz creation from surgical recordings, streamlining training processes

Software Engineer Intern — May 2021 – July 2021

Intel — *Internship · Dalian, China*

- Developed a relational database (SQL) to track installed manufacturing tools, enhancing operational efficiency
- Conducted ETL process (Pandas, SQLAlchemy) to systematically update and validate data, ensuring integrity & security

Projects

DB Client | *Java (SpringBoot, Lombok, Resilience4j), Tomcat, Gradle, Docker, TypeScript, AWS, DynamoDB*

- Developed a REST API Tomcat server with SpringBoot for CRUD operations with retry strategies on DynamoDB
- Architected a key-value data model optimized for efficiently storing & updating user-submitted resume data in DynamoDB
- Deployed the containerized server instance to AWS Fargate using CDK, architecting the Cloud infrastructure using VPC, ELB, Route 53, and ACM, achieving 160ms request-response time for large payloads

Flirting Sentiment Analysis | *Python (TensorFlow, PyTorch), Hugging Face, Kaggle*

- Engineered LSTM and BERT models to detect subtle cues of flirting in text, achieving a best-in-class accuracy of 95%
- Enhanced model accuracy by 20%+ through rigorous hyperparameter tuning and innovative data preprocessing methods

Parallel SCS | *C++ (MPI, OpenMP, CUDA)*

- Created 2 novel parallel algorithms for the SCS problem, reducing time from $O(n^2)$ to $O(n)$ through dependence analysis
- Optimized memory access, branching, and synchronization to achieve near-linear speedup and efficiency close to 1

Roblox Scam Education | *Python (Flask), JS (Vue, D3), HTML, CSS (Bootstrap)* — Figma

- Developed a web app via user-centered design to interactively assist users in identifying Free Robux internet scams
- Established an 80% increase in user familiarity with internet safety after product use, validated by pre & post surveys