

ZIJIAN ZHONG

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PROFILE SUMMARY

- Dedicated Software Engineer with a strong foundation in full-stack development, cloud computing, and modern software engineering best practices.
- Proven proficiency in Python, Java, C++, and JavaScript/TypeScript, with hands-on experience in frameworks like Angular, React, Node.js, and Spring Boot.
- Skilled in designing RESTful APIs, implementing scalable microservices, and certified as AWS solution architect and AWS developer.
- Adept at Agile methodologies, CI/CD pipelines (Docker, Kubernetes), and test-driven development to deliver secure, efficient, and maintainable code.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, C#, Scala, JavaScript, TypeScript, OCaml, SQL, HTML, CSS

Frameworks & Libraries: React, Angular, Spring Boot, Unity, REST API, Bootstrap, Tailwind, Flutter, Node.js, express.js, OpenGL

Database: MySQL, MongoDB, PostgreSQL

Cloud & DevOps: AWS (EC2, S3, Lambda, RDS, CloudFormation), GCP (App Engine), Docker, Kubernetes, Git, GitHub, Postman, CI/CD

EDUCATION

University of Southern California

Los Angeles, CA

Master of Science in Computer Science • 3.6/4.0 GPA

August 2022 - May 2024

University at Buffalo

Buffalo, NY

Bachelor of Science in Computer Science • 3.7/4.0 GPA with high distinction

August 2018 - May 2022

Minor in Mathematics

PROFESSIONAL EXPERIENCE

University at Buffalo

Buffalo, NY

Research Assistant (Software Engineer)

January 2021 - September 2021

- Collaborated with interdisciplinary teams in an Agile/Scrum environment to refine app design, enhanced user engagement by 20% through streamlined navigation and improved accessibility features, resulting in higher retention and a 15% increase in daily active users.
- Processed and analyzed complex datasets using Python for stress measure and prediction purposes
- Co-author of research paper "Stress prediction using micro-EMA and machine learning during COVID-19 social isolation."

CERTIFICATIONS

- AWS Certified Solutions Architect - Associate, AWS
- AWS Certified Developer - Associate, AWS

PROJECTS

eBay Shopping App

Angular, Java, JavaScript, Mobile App, Web App, MongoDB, Google Cloud, Bootstrap, NodeJS, UI/UX

- Developed a full-stack Angular and Node.js e-commerce platform integrated with the eBay RESTful API, leveraging MongoDB for scalable data storage and deploying on Google Cloud (App Engine) for high availability.
- Implemented microservices architecture for modular scalability, implemented CI/CD pipelines, and followed TDD to ensure code quality.
- Implemented responsive front-end UI using Bootstrap, improved site performance by 30%.
- Improved site performance by 30% and employed OAuth 2.0 and JWT-based authentication for secure user sessions.
- Implemented cross-platform capability with Java to provide seamless shopping experience for users who use mobile app.

Text Chat Application

C++, Socket Programming, TCP, Networking

- Engineered a C++-based client-server messaging application using socket programming and TCP protocols.
- Designed a robust architecture supporting unicast and broadcast messages and implemented offline messaging queues.
- Utilized network-level security and load testing strategies to ensure reliable communication under high concurrency.

Ray Tracing

C++, OpenGL, Computer Graphics

- Created a C++/OpenGL-based ray tracing engine for rendering complex surfaces with advanced lighting, shadows, and anti-aliasing.
- Employed supersampling techniques and optimized rendering algorithms to reduce artifacting and improve computational efficiency by 50% with multithreading optimization.

PUBLICATIONS

- Li, H., Zheng, E., Zhong, Z., Xu, C., Roma, N., Lamkin, S., Von Visger, T. T., Chang, Y.-P., & Xu, W. (2022). Stress prediction using micro-EMA and machine learning during COVID-19 social isolation. *Smart Health*, 23, 100242.