Mason Wilcox

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EDUCATION

Western Governors University | Salt Lake City, UT   **November 2025**

Bachelor of Science in **Software Engineering**

- *Relevant coursework*: Advanced Data Management, Data Structures & Algorithms, Back-End Programming, Advanced Java, Front-End Web Development, Cloud Foundations, Software Security and Testing

Defense Language Institute | Monterey, CA   **June 2022**

Certificate of Linguistic Proficiency in **Mandarin Chinese**

TECHNICAL EXPERIENCE

Software Developer | Remote, US   **Jun 2017 – Aug 2020**

Fortune Network

- Engineered and maintained server-side modules and event-driven backend systems in a microservice-style architecture for a multiplayer platform (avg. 200 CCU, ~1600 peak).
- Integrated platform logic with SQL databases and Redis for caching, state management, and high-throughput data access.
- Built a custom game client in a team of three, implementing core systems such as rendering pipelines and interaction layers.
- Co-developed an anti-cheat and anomaly detection system using packet inspection, behavioral heuristics, and rule-based detection.
- Optimized real-time, low-latency features through asynchronous processing, code-path profiling, and performance tuning.
- Diagnosed production issues using logging, performance metrics, and instrumentation, improving stability and reducing downtime.
- Wrote unit and integration tests using JUnit and Mockito and collaborated on automated build/test jobs in a CI/CD pipeline to support rapid, reliable releases.
- Collaborated in an Agile environment to plan features, refine requirements, review code, and deploy iterative updates to a high-traffic live environment.

CLEARED PROFESSIONAL EXPERIENCE

Intelligence Automation Operations | Aurora, CO   **Aug 2025 – Present**

CACI International Inc.

- Design and maintain Python automation scripts to generate and aggregate data for daily and weekly briefings for site leadership and the agency director.
- Use Linux-based tools, logging dashboards, and ticketing systems to investigate production incidents and collaborate with team members on remediation.
- Monitor and triage issues across 300+ cloud-hosted automated strategies and microservices, identifying defects, coordinating fixes, and restoring normal operations.
- Provide 24/7 technical support to global customers, ensuring timely communication and delivery of critical updates to senior leaders.

Mandarin Airborne Cryptologic Language Analyst | Tucson, AZ   **Aug 2020 – Nov 2024**

United States Air Force

- Automated an end-to-end analysis workflow using Python and AI tools, decreasing processing time by approximately 70%.
- Provided real-time intelligence to decision makers by applying Mandarin proficiency and interpreting airborne data.
- Coordinated with multidisciplinary teams to synthesize and communicate critical information to high-level strategic decision makers.
- Applied technical expertise in advanced intelligence systems to analyze and assess threats, directly influencing mission outcomes.

TECHNICAL PROJECTS

Java Redis Server | GitHub Repository   **Oct 2025 – Present**

In-Memory Data Store Built from Scratch

- Built a networked data server in Java that listens on a TCP port, manages multiple client connections, and processes commands.
- Implemented concurrency and thread-safe data handling to support simultaneous clients without data loss or race conditions.
- Wrote a full parser and encoder for the RESP2 protocol enabling structured communication between clients and the server.
- Designed in-memory data models supporting key-value storage, lists, and message streams with efficient read and write operations.
- Applied low-level networking, multi-threading, and system design concepts to mirror real-world server behavior and performance.

CERTIFICATIONS AND SKILLS

Certifications: CompTIA Security+, CompTIA Project+, CompTIA A+, AWS Certified Cloud Practitioner, PeopleCert ITIL 4 Foundation

Technical: Java, Spring Boot, TypeScript, Python, RESTful APIs, Angular, Vue.js, Bootstrap, JUnit, Mockito, AWS (EC2, RDS, S3, Lambda), Git, GitLab, CI/CD pipelines, Docker, Linux, Confluence, MySQL, PostgreSQL, Redis, Agile Methodologies, Full-stack development

General: Troubleshooting, Documentation, Ticketing Systems, Customer Support, Incident Response, Problem Solving, Communication

Languages: English (Native), Mandarin Chinese (Advanced)