

# ISABEL CHEN

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## SKILLS

**Languages:** C/C++, Python, TypeScript, JavaScript, SQL, HTML, CSS

**Platforms & Data:** AWS, MongoDB, MySQL, Redis, PostgreSQL

**Frameworks & Tools:** React.js, Next.js, Vue.js, FastAPI, Node.js, Docker, Kubernetes

**AI & Product:** Prompt Engineering, LLM Workflows, Knowledge Platforms, Workflow Design, Accessibility, UI Architecture

## PROFESSIONAL EXPERIENCE

Oct 2025 - Present

### OmegaUp (Education Platform)

Software Developer | PHP | MySQL | Redis | Python

Remote

- Resolved cross-stack production issues in backend services, MySQL, and Redis on Linux, improving reliability for a coding contest platform serving 100K+ users with large-scale concurrent code runs.
- Designed and implemented a secure multi-language code execution platform using ephemeral Docker sandboxes (network/file-system isolation, CPU/memory limits, and timeouts) for untrusted code, delivering sub-second to seconds-level execution feedback.
- Performed persistence-layer reliability engineering (query optimization, transaction boundary fixes, and schema constraint remediation), reducing database error rates by 60% and MTTR by 35%.

### Springer Capital (Financial Services)

Full Stack Developer Intern | Python | TypeScript | WebSocket

August 2025 - October 2025

Chicago, IL, USA

- Led re-architecture of analytics pipelines (Python, Redis, ClickHouse) as part of a small team, reducing API latency by 85% (300ms → 50ms) and enabling real-time data dashboards.
- Shipped **TypeScript**-based workflow features and real-time views using REST and **WebSocket** APIs for latency-sensitive internal web tools.
- Developed end-to-end analytics dashboards (React, TypeScript) processing 50K+ monthly queries, enabling data-driven decision-making for enterprise clients.
- Designed and implemented CI/CD pipelines consolidating 12 microservices into a monorepo with automated GKE deployments, reducing release cycles from 30 minutes to 5 minutes.

### University of Michigan

Software Engineering Intern & Research Assistant

August 2024 - March 2025

Ann Arbor, MI

- Optimized backend data retrieval workflows with TypeScript and state management improvements, reducing server response time by 15%.
- Led a team of 5 interns to build a web-based email management platform using React and Node.js, implementing Google OAuth 2.0 and Gmail API integration.
- Built an AWS Lambda-based pipeline (Python, DynamoDB, API Gateway) to automate user activity logging for a research platform, saving researchers 50+ hours per month.

### Temu (E-commerce company)

Software Engineer Intern

June 2024 - September 2024

Shanghai, China

- Designed and optimized a C++ distributed crawler/indexer with 16 worker threads, achieving 10K docs/sec index build throughput via segment-based indexing.
- Delivered low-latency search performance at scale with Redis caching: P50 5ms / P95 20ms / P99 50ms, while maintaining 85-95% cache hit rate on hot URLs.
- Improved crawl efficiency through deduplication, reducing redundant fetches by 60-80% and significantly lowering upstream bandwidth and processing overhead.
- Built linear-scaling indexing/storage pipelines with memory footprint around ~2GB per 1M docs and stable 60-70% CPU utilization under multicore concurrency.

## EDUCATION

University of Michigan - Ann Arbor

Bachelor's, Computer Science

Graduated in August 2025

