Rishit Yogesh Bafna

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Education

Arizona State University — Tempe, AZ
Master of Science in Computer Science — *Jan 2026 – May 2027*

Arizona State University — Tempe, AZ
Bachelor of Science in Computer Science (Software Engineering), cum laude — GPA: 3.4 — *Dec 2025*

- **Honors:** New American University Scholar (4 years), Dean's List (multiple semesters)
- **Relevant Coursework:** Operating Systems, Distributed Software Development, Machine Learning, Software Analysis & Design, Programming Languages

Projects

Distributed Key-Value Store | Java, Raft Consensus, gRPC, Protocol Buffers — 2026

- Built fault-tolerant distributed database implementing Raft consensus algorithm with leader election, log replication, and automatic failover across 5-node cluster, verified through chaos testing with leader crashes.
- Implemented gRPC-based client-server protocol with REST API supporting SET/GET/DELETE operations, achieving correct leader redirection and maintaining data consistency across node failures.

GitHub Dependency Visualizer | React, TypeScript, Node.js, Cytoscape.js, PostgreSQL — 2026

- Built full-stack web application analyzing GitHub repositories to generate interactive dependency graphs with 1000+ nodes, detecting security vulnerabilities via OSV API and identifying circular dependencies through graph cycle detection algorithms.
- Implemented force-directed graph visualization with real-time filtering, zoom, and search supporting npm, PyPI, and Go modules, reducing dependency analysis time from hours to seconds for codebases with 500+ dependencies.

Real-Time Collaborative Code Editor | React, WebSockets, CRDT, Redis, Docker — 2025–Present

- Developed collaborative editing platform supporting 50+ simultaneous users per document using Conflict-free Replicated Data Types for operational transformation and eventual consistency.
- Implemented WebSocket server with Redis pub/sub for horizontal scaling, handling 1000+ concurrent connections with automatic reconnection and conflict resolution.

Job Application Tracker | JavaScript, Chrome API, React, Node.js, PostgreSQL — 2026

- Created Chrome extension with intelligent form detection auto-filling job applications across 50+ job boards, reducing application time by 60% through DOM parsing and field mapping.
- Built web dashboard tracking 200+ applications with status updates, deadline reminders, and analytics showing response rates and application patterns.

Experience

Software Engineering Intern — Aug 2025 – Dec 2025
J. Miller Custom Cues — *Tempe, AZ*

- Collaborated with 3-person team to ship production 3D configurator using Three.js and React, reducing customer revisions by 35% and currently serving active customers with real-time photorealistic cue customization.
- Built PostgreSQL REST API with Stripe payment integration processing live orders, implementing transactional cart management eliminating checkout errors and achieving sub-200ms response times in production.

Software Engineering Intern — May 2025 – Jul 2025
Winssoft Technologies India Pvt. Ltd. — *Mumbai, India*

- Optimized production SQL queries processing 500K+ records with composite indexes and materialized views, reducing dashboard page load time from 8 seconds to under 2 seconds.
- Refactored payment microservice adding idempotency checks and database constraints, eliminating duplicate transaction bugs affecting data integrity across 10K+ daily transactions.

Skills

Languages: Java, Python, JavaScript, TypeScript, C++, C, SQL
Frontend: React, TypeScript, HTML/CSS, Chrome Extensions
Backend: Node.js, FastAPI, Express.js, gRPC, WebSockets, REST APIs
Databases: PostgreSQL, MySQL, MongoDB, Redis
Tools & Platforms: Git, Docker, Linux, AWS (S3, EC2), JMeter