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 with leader election and log replication across 5-node cluster, verified through chaos testing with automatic failover during leader crashes.
- Designed gRPC client-server protocol with REST API for SET/GET/DELETE operations, achieving sub-5ms latency and correct leader redirection across node failures.

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

- Built full-stack application analyzing GitHub repositories to visualize dependency graphs with 500+ nodes, detecting security vulnerabilities through OSV API and identifying circular dependencies.
- Implemented force-directed graph visualization with filtering and search supporting 3 package ecosystems (npm, PyPI, Go), reducing manual dependency analysis time by 90%.

AI Interview Coach | React, Web Speech API, Node.js, PostgreSQL — 2026

- Built and deployed full-stack interview practice platform using Web Speech API for live browser-based transcription, scoring answers on STAR structure, clarity, filler words, and pacing in under 3 seconds.
- Implemented rubric-based NLP scoring engine across 3 interview modes (behavioral, technical, freestyle) with session history tracking progress across attempts.

Multithreaded HTTP Server | C++, POSIX Sockets, Thread Pool — 2024

- Built HTTP/1.1 web server from scratch using POSIX sockets with 4-thread pool architecture supporting 100+ concurrent connections and persistent keep-alive sessions.
- Implemented work-stealing queue for load balancing and benchmarked 5K+ requests/sec throughput with ApacheBench, achieving efficient request handling through lock-free parsing.

Experience

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

- Shipped production 3D configurator using Three.js and React with 3-person team, reducing customer design revisions by 35% through real-time photorealistic rendering with WebGL pipeline.
- Built PostgreSQL REST API with Stripe integration processing 100+ customer orders, implementing transactional cart management and achieving sub-200ms response times in production.

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

- Optimized SQL queries processing 200K+ records by implementing composite indexes and materialized views, reducing analytics dashboard load time from 8 seconds to under 2 seconds.
- Refactored payment microservice handling 5K+ daily transactions, adding idempotency checks and database constraints to eliminate duplicate transaction bugs.

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