

# Rishit Yogesh Bafna

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## EDUCATION

<b>Arizona State University</b> <i>Master of Science in Computer Science</i>	Tempe, AZ
<b>Arizona State University</b> <i>Bachelor of Science in Computer Science (Software Engineering), cum laude — GPA: 3.4</i>	Jan 2026 – May 2027
<ul style="list-style-type: none"><li>– <b>Honors:</b> New American University Scholar (4 years), Dean's List (multiple semesters)</li><li>– <b>Relevant Coursework:</b> Operating Systems, Distributed Software Development, Machine Learning, Software Analysis &amp; Design, Programming Languages</li></ul>	Tempe, AZ
	Dec 2025

## PROJECTS

Distributed Key-Value Store   Java, Raft Consensus, gRPC, Protocol Buffers	2026
<ul style="list-style-type: none"><li>– 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.</li><li>– Designed gRPC client-server protocol with REST API for SET/GET/DELETE operations, achieving sub-5ms latency and correct leader redirection across node failures.</li></ul>	
GitHub Dependency Visualizer   React, TypeScript, Node.js, Cytoscape.js	2026
<ul style="list-style-type: none"><li>– Built full-stack application analyzing GitHub repositories to visualize dependency graphs with 500+ nodes, detecting security vulnerabilities through OSV API and identifying circular dependencies.</li><li>– Implemented force-directed graph visualization with filtering and search supporting 3 package ecosystems (npm, PyPI, Go), reducing manual dependency analysis time by 90%.</li></ul>	
Real-Time Collaborative Code Editor   React, WebSockets, CRDT, Redis	2025–2026
<ul style="list-style-type: none"><li>– Developed collaborative editing platform supporting 20+ concurrent users per document using Conflict-free Replicated Data Types for automatic conflict resolution and eventual consistency.</li><li>– Built WebSocket server with Redis pub/sub handling 200+ concurrent connections with sub-100ms sync latency and automatic reconnection on network failures.</li></ul>	
Multithreaded HTTP Server   C++, POSIX Sockets, Thread Pool	2024
<ul style="list-style-type: none"><li>– 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.</li><li>– Implemented work-stealing queue for load balancing and benchmarked 5K+ requests/sec throughput with ApacheBench, achieving efficient request handling through lock-free parsing.</li></ul>	

## EXPERIENCE

<b>Software Engineering Intern</b> <i>J. Miller Custom Cues</i>	Aug 2025 – Dec 2025
<ul style="list-style-type: none"><li>– 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.</li><li>– Built PostgreSQL REST API with Stripe integration processing 100+ customer orders, implementing transactional cart management and achieving sub-200ms response times in production.</li></ul>	Tempe, AZ
<b>Software Engineering Intern</b> <i>Winssoft Technologies India Pvt. Ltd.</i>	May 2025 – Jul 2025
<ul style="list-style-type: none"><li>– 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.</li><li>– Refactored payment microservice handling 5K+ daily transactions, adding idempotency checks and database constraints to eliminate duplicate transaction bugs.</li></ul>	Mumbai, India

## 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