

## Education

- **Arizona State University**, Tempe, AZ  
MS in Computer Science Aug 2025 – Present
- **Manipal University Jaipur**, India  
BTech in Computer Science Aug 2021 – May 2025

## Software Engineering & Systems Skills

- Programming Languages:** C, C++, Java, Go, Python, SQL, Bash
- Backend Engineering:** REST APIs, request lifecycles, service interfaces, error handling, concurrency fundamentals
- Systems & OS:** Linux, Unix utilities, process management, memory basics, debugging, logging
- Distributed Systems:** service decomposition, scalability concepts, fault isolation, latency awareness
- Networking Fundamentals:** TCP/IP, HTTP/HTTPS, DNS, routing concepts, service discovery
- Cloud & DevOps:** Docker, Kubernetes (K3s/K3d), Jenkins CI/CD, container orchestration
- Data & Storage:** PostgreSQL, MySQL, Redis, Neo4j; schema design, indexing, query optimization
- Testing & Automation:** unit testing, build validation, configuration checks, deployment verification
- ML Systems Exposure:** ML pipelines, inference workflows, model evaluation, system integration

## Experience

- **National Institute of Urban Affairs (Govt. of India)** New Delhi, India  
*Software Engineer Intern – Platforms & DevOps* Aug 2024 – May 2025
  - Built and operated containerized backend services using Docker and Kubernetes to support distributed public-sector platforms.
  - Implemented Jenkins CI/CD pipelines for build verification, configuration validation, and environment consistency.
  - Developed pre-deployment checks to validate database connectivity, cache availability, secrets, and runtime configuration.
  - Diagnosed production issues including container crashes, database timeouts, and misconfigurations using logs and system signals.
  - Authored operational runbooks and documentation to improve deployment reliability and onboarding efficiency.
- **Smart Cities Mission (MoHUA, Govt. of India)** New Delhi, India  
*Software & Data Engineering Intern* Dec 2023 – Feb 2024
  - Built SQL-backed data pipelines and backend workflows to process large, heterogeneous datasets across 100+ cities.
  - Designed validation logic and consistency checks to handle noisy and incomplete real-world data.
  - Translated loosely defined requirements into structured queries, metrics, and reproducible workflows.
- **Siemens Healthineers** Cyber City, Delhi, India  
*Software Intern – Digital Systems* May 2023 – Jul 2023
  - Standardized backend data capture and reporting workflows to improve system reliability.
  - Implemented validation rules to reduce inconsistent inputs and downstream processing errors.

## Projects

- **HireMate – Backend Conversational AI Platform**  
Designed a retrieval-augmented backend system using embeddings and Neo4j, focusing on service orchestration, semantic retrieval, ranking logic, and API-driven inference. Evaluated latency, consistency, and failure modes under varied query loads.
- **UPYOG Cloud Platform**  
Developed a containerized multi-service backend with CI/CD automation and deployment validation. Emphasized platform stability, rollback safety, and environment reproducibility.
- **Feature Selection using Gravitational Search Optimization**  
Implemented and evaluated optimization algorithms on high-dimensional datasets, analyzing convergence behavior, computational cost, and accuracy tradeoffs.

## Research

- **Analysis and Mathematical Models of AI and Its Legal Boundaries**  
Conducted a systems-oriented analysis of fairness, bias, interpretability, and accountability in AI-driven decision systems, with implications for large-scale production software.