SHRUTHI KODATI

Shruthikodati | shruthi-kodati | shruthikodati24@gmail.com | 443-574-6911 | Chicago, IL

EDUCATION

University of Illinois Chicago *August 2024- May 2026*
Master of Science in Computer Science *GPA: 3.6/4.0*

CVR College Of Engineering *August 2020- May 2024*
Bachelor of Technology in Computer Science *CGPA: 8.08/10.0*

SKILLS

Languages: Python, TypeScript, Java, SQL, Shell, HTML5/CSS3
AI/ML & Agents: LLM Evaluation, Prompt Engineering, RAG, Tool Calling, MCP, Vector DBs, Structured Outputs
Frameworks: Express.js, React.js, Next.js, Redux, GraphQL
Data & Search: PostgreSQL, MySQL, MongoDB, Redis, Schema Design, Query Optimization, Indexing
Tools & Engineering: REST APIs, Microservices, Automated Testing, Docker, AWS, Linux, Postman

WORK EXPERIENCE

University of Illinois Chicago *July 2026 – Present*
AI Engineer *Chicago, IL*
- Built and deployed AI pipelines using LLMs, RAG, and MCP to support research workflows for 5+ academic teams.
- Developed Python backend services and REST APIs that handle 1M+ requests per month.
- Optimized SQL queries and vector search to reduce bottlenecks and improve accuracy under heavy load.

University of Illinois Chicago *December 2024 – May 2026*
Software Engineer *Chicago, IL*
- Designed PostgreSQL schemas, RESTful APIs, and MCP integrations to automate clinical dietary workflows, reducing administrative processing time and supporting high-volume clinical records.
- Optimized SQL queries and backend logic across 12+ critical endpoints to improve performance under concurrent traffic.
- Built responsive React.js interfaces and managed end-to-end deployment on AWS with JWT auth and CI/CD.

CVR College of Engineering *January 2023 – June 2024*
Software Engineer Intern *Hyderabad, India*
- Developed a full-stack MERN (MongoDB, Express.js, React.js, Node.js) application with TypeScript and Next.js, digitizing research administration workflows for 200+ daily active users.
- Engineered 15+ modular React.js components and secure Express.js APIs for faculty profiles and project tracking.
- Wrote 50+ unit and integration tests to ensure reliable system operation, data validation, and code maintainability.

PROJECTS

Multi-Modal RAG for SEC 10-K Financial Document Analysis *2025*
Technologies: Python, Flask, LLaMA 3.2, FAISS, BM25, Sentence Transformers
- Built a hierarchical two-stage RAG system processing 150 SEC 10-K filings (8GB, 45K text chunks, 12K tables), achieving 85% Table Recall@5 and a 12-point EM improvement over text-only baselines.
- Implemented hybrid dense (FAISS) and sparse (BM25) retrieval with query routing and mathematical verification, achieving 96% answer faithfulness at 4.2s median latency.
- Engineered table row-sentence representations and citations linking responses to source sections and table cells.

Cipher – Signal Protocol Encrypted Messenger *Jan 2026 – May 2026*
Technologies: Node.js, Socket.io, WebSockets, JavaScript, Signal Protocol, Ed25519
- Built an end-to-end encrypted messenger using X3DH and Double Ratchet for forward secrecy and session recovery.
- Implemented Ed25519 signature verification, persistent offline message queues, delivery acknowledgments, deduplication, rate limiting, and replay attack prevention.
- Built encrypted file transfers (25MB, 12 file types) with UUID-namespaced storage and path traversal protection.