

ROHITH RAO VUJJINI

319-936-6883 | vujjinirohith0507@gmail.com | [LinkedIn](#) | [Portfolio](#) | [Github](#)

Summary: Software Engineer with 3+ years of experience building reliable, high-performance systems in healthcare settings using C/C++, Java, Linux, and CI/CD practices. Skilled in leveraging cloud platforms and event-driven architecture to enhance system performance and reliability.

EDUCATION

| | |
|-----------------------------------------------------------------------------------------------------------|----------------------------|
| University of Iowa, Iowa City, IA Master of Science in Computer Science, GPA – 3.82/4.00 | Aug 2023 - Dec 2025 |
|-----------------------------------------------------------------------------------------------------------|----------------------------|

RELEVANT EXPERIENCE

| | |
|-------------------------------------------------------------|---------------------------|
| Software Engineer CDS Global INC, Des Moines, Iowa | May 2025 - Present |
|-------------------------------------------------------------|---------------------------|

- Improved performance and scalability (2–4× throughput, 40–60% lower p95 latency) by modernizing backend services with async I/O, caching, and optimized database access patterns.
- Lowered IVR production issues by 40% by centralizing system diagnostics, error-recovery protocols to optimize on-call support.
- Enhanced data integrity and query performance (35–50%) via idempotent writes, table partitioning, and audit triggers.
- 2025 Above & Beyond Award for technical impact & collaboration at CDS Global.

| | |
|----------------------------------------------------------------------------------------------|----------------------------|
| Software and Data Engineer Department of Microbiology, Haim Lab, University of Iowa | Oct 2023 - Dec 2025 |
|----------------------------------------------------------------------------------------------|----------------------------|

- Designed end-to-end healthcare analytics application for HIV resistance prediction achieving ROC-AUC 0.95 and 15–25% improvement over linear baselines.
- Improved experiment tracking and validation velocity (3× faster) using containerized pipelines, versioning, and metric logging.
- Engineered algorithms to automate preprocessing, eliminating bottlenecks and saving 90% of operational time for team members.

| | |
|----------------------------------------------------------------------------|----------------------------|
| Digital Technology Intern, Cloud & IoT Products GE Appliances | Jan 2023 - Jul 2023 |
|----------------------------------------------------------------------------|----------------------------|

- Developed and deployed a RAG-based (Retrieval-Augmented Generation) chatbot using LangChain and GPT-3, delivering high-accuracy, context-driven support for GE Appliances users.
- Streamlined technical operations by implementing a Llama-driven extraction model for user manuals, achieving an 80% reduction in search time for field repair personnel.
- Leveraged OpenAI's CLIP for a zero-shot computer vision model on real-time pizza readiness detection, with an accuracy of 94%.

RELEVANT PROJECTS

| | |
|-------------------------------------------------------|-------------------------------------------------|
| Data Storage in SDLC of IoT Devices – Big Data | C, MongoDB, Cassandra, MySQL, PostgreSQL |
|-------------------------------------------------------|-------------------------------------------------|

- Generated high-velocity IoT workloads and benchmarked throughput, read latency, fault tolerance & others at each scale milestone.
- Identified multi-node Cassandra as the outstanding architecture beyond 20GB+, with stable write latency & horizontal scalability.

| | |
|----------------------------------------------------|------------------------------------------|
| CensorFreeLLMs – Language Model Enhancement | Python, PyTorch, Transformer Lens |
|----------------------------------------------------|------------------------------------------|

- Achieved 95% accuracy when validated robustness on 10,000+ prompts across benign, sensitive, adversarial, and edge-case inputs.
- Demonstrated a cost-efficient alternative to retraining for transformer-based LLMs using activation ablation technique.

PUBLICATIONS

- [Location-Aware Octa Section Routing Protocol \(LOR\)](#): Enhancing Wireless Ad Hoc Network Efficiency, Reducing Control.
- First Author, Comprehensive Mapping of the Virus and Host Factors that Guide HIV-1 Escape from a Therapeutic in Treated Subjects. Manuscript in review, 2025.
- Microsoft Azure Fundamentals Certified -Cloud Computing, 2025.

TECHNICAL SKILLS

Languages: C, C++, Java, Python, SQL

Frameworks: Qt, React, Node.js, Flask, Angular

AI/ML: Deep Learning, Computer Vision, NLP

Database: PostgreSQL, MongoDB, Cassandra

Cloud & DevOps: AWS (Lambda, DynamoDB, Kinesis, S3, Kinesis), Azure, Docker, Jira, Git, Datadog, CI/CD, REST API's