

# Krish Gandhi

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## EDUCATION

<b>University of Illinois Urbana-Champaign</b> Master of Computer Science in Computer Science	May 2027 Urbana, IL
<b>University of Illinois Urbana-Champaign</b> Bachelor of Science in Computer Engineering, Bachelor of Science in Statistics, Minor in Business Activities: Quant @ Illinois, Financial Engineering Club, Intramural Football, Intramural Basketball Courses: Distributed Systems, Database Systems, Algorithms, Machine Learning, Operating Systems, Data Structures	May 2026 Urbana, IL

## EXPERIENCE

<b>Parasol Lab   University of Illinois Urbana-Champaign</b> Software Developer	Aug. 2025 – Present Urbana, IL
<ul style="list-style-type: none"><li>Will be using C++ to develop STAPL (Standard Template Adaptive Parallel Library), an open-source framework for developing parallel programs in both shared and distributed memory parallel systems.</li></ul>	
<b>Optum</b> Software Engineering Intern	Jun. 2025 – Aug. 2025 Eden Prairie, MN
<ul style="list-style-type: none"><li>Built and containerized code analysis tool using Python, Docker and AWS ECS to evaluate company codebase.</li><li>Hosted app on AWS EKS with Kubernetes LoadBalancer, distributing traffic and reducing request latency by 87%.</li><li>Designed an event-driven pipeline using GitHub Webhooks, AWS API Gateway, and AWS Lambda to process push events and update code evaluation scores in AWS DynamoDB.</li><li>Leveraged Databricks and scikit-learn to develop a CatBoost classification model to predict patient claim outcomes.</li></ul>	
<b>Quant at Illinois   University of Illinois Urbana-Champaign</b> Quantitative Developer	Feb. 2025 – Present Urbana, IL
<ul style="list-style-type: none"><li>Vectorized articles using FinBert embeddings and trained an XGBoost model to predict and trade on price deltas.</li><li>Developed a FX trading strategy in Rust using Floyd-Warshall's algorithm to execute triangle arbitrage trades.</li></ul>	
<b>Optum</b> Software Engineering Intern	Jun. 2024 – Aug. 2024 Basking Ridge, NJ
<ul style="list-style-type: none"><li>Created a CI/CD pipeline to automate unit testing of 250+ critical components with Apache Kafka, GitHub Actions, AWS S3 and Java to increase system security and save \$300,000+ in resources and 2,600 man hours annually.</li><li>Built a full-stack web app using Flask to automate network analysis, speeding up process by 81%.</li><li>Developed a script to determine 185 relevant GitHub repos out of 30,000 and parse from the configuration files.</li></ul>	

## PROJECTS

<b>Dynamic Compute Cluster   K3s, SLURM, Ansible, Rust, Go</b> <ul style="list-style-type: none"><li>Architecting an 8-node hybrid compute cluster with 64 cores and 128 threads and dynamic switching between Kubernetes (k3s) and Linux SLURM for containerized and HPC-style workloads.</li><li>Developing a custom job scheduler with Rust to estimate resource requirements and route workloads to nodes.</li><li>Designing a job submission and node monitoring dashboard using Go to provide real-time system metrics and logs.</li></ul>
<b>RISC-V Operating System   C, RISC-V Assembly, QEMU Emulator</b> <ul style="list-style-type: none"><li>Built a Unix-like RISC-V operating system from scratch using C and Assembly, featuring concurrency, memory virtualization, a filesystem, interrupts, device I/O, forks, pipes, paging, syscalls, and user/kernel space separation.</li><li>Virtualized UART, RTC, RNG and memory block VirtIO devices to implement preemptive interrupts, serial communication, random number generation, and filesystem persistence.</li><li>Developed an ELF loader and shell capable of running interactive programs (Trek, Rogue, Zork, and Doom).</li></ul>

## TECHNICAL SKILLS

**Languages:** Python, C++, C, Rust, Java, JavaScript, SystemVerilog, R, RISC-V Assembly, Bash, MATLAB  
**Frameworks:** React, Astro  
**ML/AI:** PyTorch, scikit-learn, OpenCV, HuggingFace  
**Databases/DBMS:** Snowflake, Databricks, AWS RDS, AWS DynamoDB, MongoDB, PostgreSQL, MySQL, SQL  
**Cloud Computing:** AWS, GCP, Supabase, Render, Vercel  
**DevOps:** Docker, Kubernetes, Terraform, Ansible, Jenkins, Apache Kafka, GitHub, GitHub Actions, SSH