Srijan Suresh

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Education

University of Illinois at Chicago Expected Graduation: May 2026
Bachelor of Science, Computer Science *Chicago, IL*

- **Relevant Coursework:** Data Structures & Algorithms, Linear Algebra, Differential Equations, Computer Vision, Database Management, Natural Language Processing, Intro to Data Science, Embedded Systems

Experience

University of Illinois at Chicago Aug 2024 – May 2025
Undergraduate Research Assistant

- Fine-tuned LLaMA3 and Mistral on CUDA-accelerated HPC clusters via Ollama, modeling commuter behavior in 700+ agent-based simulations for scalable travel demand forecasting.
- Built Python Jinja2-based prompt templates to steer LLM outputs in synthetic survey generation workflows.
- Integrated Hugging Face LLMs to simulate realistic respondents, cutting cloud compute costs by 15%.

ACT Inc June 2022 – Aug 2022
Software Engineer Intern

- Automated internal Python workflows to process student test scores, improving backend latency by 18% and streamlining daily data operations.
- Designed Tableau dashboards to visualize 100+ academic metrics, supporting faster reports for analysts.
- Resolved 15+ JIRA tickets during Agile sprints, contributed to updates used by 500+ institutional clients.

Projects

Quantitative Risk Modeling | *Python, NumPy, Matplotlib, Seaborn*

- Modeled tail risk and portfolio volatility using Monte Carlo simulations with Geometric Brownian Motion across 10K+ synthetic price paths.
- Engineered a synthetic data pipeline to train RL agents, boosting black swan event detection by 4x.
- Applied adaptive LSTM/Transformer hybrids to optimize trading strategy in extreme market scenarios.

3-CardPoker | *Java, JavaFX, CSS, JUnit*

- Built a multiplayer 3 Card Poker game using JavaFX for an interactive UI, styled with CSS, enabling players to place bets, view cards, and receive results in real-time with smooth animations.
- Designed a client-server architecture using Java Sockets, supporting simultaneous player connections with multithreaded request handling, ensuring seamless game state synchronization across clients.

IoT Environmental Monitor | *C, Arduino, MQTT, Adafruit IO*

- Built a real-time IoT system in C/C++ with 4 Arduino nodes, automating climate feedback using DHT11, MQ-135, LDR, and KY-038 sensors.
- Published 20+ data points/min to Adafruit IO via MQTT, enabling live monitoring and device control.
- Delivered real-time feedback using LED alerts and servo vent control (<1s response), improving environment awareness without manual monitoring.

Technical Skills

Programming Languages: Python, Java, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R, Go
Frameworks & Libraries: React, Next.js, Node.js, Flask, PyTorch, LangChain, Pandas, NumPy, Matplotlib, JUnit
Tools: Git, Docker, AWS (S3, EC2), Redis, Firebase, CUDA, HPC, Linux, Tableau, REST API, Jira
Concepts: Fullstack Development, Machine Learning, LLM Fine-Tuning, DevOps, Microservices, CI/CD, Agile