Srikar Girijala

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Education

University of Illinois at Urbana-Champaign December 2026
Bachelor of Science in Computer Science and Statistics ***GPA**: 3.87*

- **Relevant Coursework**: Algorithms, Computer Architecture, Database Systems, Data Structures, Languages & Automata, Machine Learning, Distributed Systems, Linear Algebra

Work Experience

Data Science Intern April 2025 – August 2025
Axis Capital *Urbana, IL*

- Developed a Bayesian hierarchical model in R that achieved 90% accuracy in forecasting the severity and frequency of both ongoing and future insurance claims, helping teams anticipate claim development more effectively.
- Performed posterior predictive checks using visual diagnostics and simulation-based residual analysis to assess model fit, identifying deviations in tail claim severity and guiding model accuracy for improved risk forecasting.
- Enhanced model stability and prediction reliability by 25% via application of Markov Chain Monte Carlo diagnostics to resolve sampling errors during estimation, ensuring higher-quality insights for risk modeling.

Web Development Intern May 2025 – August 2025
University of Illinois ATLAS *Urbana, IL*

- Built and developed new user-facing features for scalable full stack applications utilizing RESTful APIs.
- Optimized and consolidated distributed state logic using custom React hooks, drastically improving the reliability of live UI updates and reducing state-related bugs in production by over 25%.
- Improved website accessibility by 40% (as measured by WCAG 2.1 standards) by implementing new UI components and ensuring all content met required accessibility guidelines.

CS124 Teaching Assistant August 2024 – Present
University of Illinois at Urbana-Champaign *Urbana, IL*

- Instructed over 1,000 students in a high-enrollment introductory computer science course, guiding them through foundational topics such as object-oriented programming, recursion, and essential data structures.
- Played a key role in training and mentoring a cohort of a dozen new tutors, ensuring consistency in instructional quality and adherence to course standards.

Projects

CHIP-8 Emulator | *C++, SDL*

- Developed a Chip-8 emulator featuring a 64x32 monochrome display capable of executing original ROMs.
- Modeled system hardware architecture, including 4KB of RAM, 16 general-purpose registers, and a 16-level stack.
- Implemented a full CPU instruction set (35 opcodes) including arithmetic, jumps, and conditional branching.

Paper Processor LLM | *Python, HuggingFace, Scikit-Learn*

- Built a Python-based document analysis pipeline that processed over 40,000 characters of text per document, using NLP with AI transformer models (BART, SPECTER) to achieve a 70% reduction in manual review time.
- Created a knowledge graph with over 100 nodes and relationships to map inter-document citations, keywords, and entities, enabling advanced visualization and insights for research.

Automatic Movement Tracker | *React, Flask, SQLAlchemy, Postman*

- Engineered a backend architecture capable of processing and analyzing 5 million movement data points daily; built predictive algorithms that provided personalized insights, enhancing user engagement metrics by 25%.
- Leveraged Postman's API testing tools in conjunction with Python scripting to rigorously test and refine JSON callbacks, achieving a 20% improvement in efficiency by streamlining data latencies.

Technical Skills

Languages: Java, Python, C/C++, C#, JavaScript/Typescript, R, SQL, Kotlin, Bash
Frameworks: React, React Native, Flask, ExpressJS, NodeJS, NextJS, FastAPI
Libraries & Databases: Scikit-learn, Scipy, HuggingFace, SQLAlchemy, PostgreSQL, MongoDB, Neo4j, NoSQL
Software & Methodologies: Git, Docker, Google Cloud, Firebase, Agile, Microsoft Office