

# Sai Sreekar Sarvepalli

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## Summary

Master's in Computer Science student with strong proficiency in Python, JavaScript, Scala, and a solid foundation in data structures, algorithms, and operating systems. Experienced in developing scalable full-stack applications, robust backend systems, and data-driven solutions using frameworks like React.js, Node.js, and Apache Spark. Skilled in Web3 technologies (smart contracts, blockchain integration) and AI/ML frameworks (TensorFlow, PyTorch, Hugging Face) for building intelligent applications. Adept at working with cloud services (AWS), designing interactive dashboards, and optimizing large-scale data pipelines. Passionate about creating user-centric products that bridge emerging technologies and real-world impact.

## Education

**UNIVERSITY OF CALIFORNIA, RIVERSIDE (GPA:3.66/4)**

*MS in Computer Science*

September 2023 - March 2025 (Expected)

*Riverside, CA*

**VELLORE INSTITUTE OF TECHNOLOGY (CGPA: 8.23/10)**

*B.Tech in CSE; CGPA: 8.23*

2019 - 2023

*Chennai, India*

## Skills

**Languages** C/C++, Python, Scala, Javascript, Java, Typescript, Git

**Frameworks/Libraries** Apache Spark, ReactJS, Node.js, Express.js, Flask, Spark, Spark SQL, Django

**Cloud** AWS, Heroku

**Database** MongoDB, MySQL, PostgreSQL, GraphQL, PostGIS

**Tools/Software** IntelliJ IDEA, VSCode, Maven, Linux Stack, Jupyter, Postman

## Experience

**UCR BIG DATA LAB**

*STUDENT RESEARCHER*

August 2024 – March 2025 (Expected)

- Enhanced BEAST (Big Exploratory Analytics on Spatio-temporal data) by integrating Scala-based APIs for optimized data retrieval and indexing.
- Refactored data pipelines using Apache Spark and transitioned from SpatialRDDs to DataFrame API, reducing processing time by 50% and improving scalability.
- Developed AI-driven data aggregation layers for complex geospatial queries, directly improving retrieval accuracy and system performance.
- Built custom APIs and designed microservices for geospatial data analysis, ensuring efficient data flow and system reliability.

**CODING SHEEP LLP**

*SDE INTERN*

December 2021 – April 2022

- Developed a full-stack NFT Marketplace using Next.js and Tailwind CSS for the front end, and Node.js with Express.js for the backend.
- Created a cross-chain bridge connecting Ethereum and BSC through Node.js, reducing confirmation times by 15%.
- Authored highly secure and efficient smart contracts for ERC20 and ERC721 tokens, resulting in a 25% reduction in gas fees and a 30% increase in transaction speed.

**XEGGO**

*SOFTWARE DEVELOPER INTERN*

September 2021 – November 2021

- Developed and deployed a software development toolkit for a money streaming protocol using Node.js, Ethers.js, and Web3.js, reducing development time by 30%.
- Enhanced codebase efficiency, improving developer productivity and streamlining integration processes.
- Created comprehensive developer documentation, cutting onboarding time by 25% and minimizing support requests.

## Projects

**Chicago Crime Analysis | UCR | [Project Link](#)**

*Scala, Apache Spark, SparkSQL, React.js, Leaflet.js, PostgreSQL, PostGIS*

- Built a data visualization tool analyzing 10GB+ of Chicago crime data using Scala and SparkSQL for insights into trends and crime hotspots.
- Developed an interactive frontend with React.js and Leaflet.js, integrating map-based visualizations and enabling neighborhood-level filtering.
- Optimized spatial joins and indexing using PostGIS, enhancing query performance and data exploration.

**Study Buddy - Berkeley CalHacks | [Project Link](#)**

*React.js, Django, Hume AI, LangChain, Ollama, RAG, Google Gemma, ChromaDB*

- Engineered an AI tutoring agent with natural language understanding (NLU) via Gemma 2 (LoRA, 4-Bit Quantization).
- Implemented a Retrieval-Augmented Generation (RAG) system with ChromaDB for context-aware interactive learning.
- Achieved 90% accuracy in personalized AI tutoring responses.

**InsureSearch | Lablab.ai Llama 3 Hackathon | [Project Link](#)**

*Next.js, TailwindCSS, Flask, Python, Llama 3*

- Designed an AI-powered document retrieval system using Llama 3, improving data retrieval accuracy by 35%.
- Built a backend service using Flask and implemented RAG pipelines to optimize search and query resolution times.

## Honors

**FileCoin Accelerator**

200+ teams | \$5000 GRANT.

**Special Mention**

500+ teams | ETHGLOBAL HACKATHON