SRI SIDDHARDHA KURRA

SOFTWARE ENGINEER

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SUMMARY

- Innovative Software Development Engineer with almost **3** years of experience in designing, developing, and deploying high-performance applications in AI/ML and enterprise AI sectors.
- Proficient in using Python, JavaScript and TypeScript
- Skilled in implementing RESTful APIs, RAG pipelines, and **Agentic AI** systems, managing databases with PostgreSQL, MongoDB and utilizing cloud services like AWS and Azure.
- Experienced in developing **AI workflows**, distributed machine learning systems, containerization with Docker, and following Agile methodologies to deliver robust software solutions.
- Adept at containerization with Docker, real-time data processing with Apache Kafka, and following Agile methodologies to deliver robust software solutions.
- Adept at collaborating with cross-functional teams including Data Scientists, Product Managers, Sales team to enhance user engagement and optimize system performance.
- Strong background in **developing intelligent applications, automated testing**, and ensuring efficient data management through advanced programming techniques.
- Demonstrated ability to drive **AI/ML projects** from conception to deployment, ensuring high quality and adherence to industry standards.

PROFESSIONAL EXPERIENCE

C3.ai, Redwood City, CA

Software Engineer **Jan 2025 - Current**

- Contributed to the development of an agentic GenAi system utilizing RAG (Retrieval-Augmented Generation) pipeline, collaborating with the team to enhance intelligent query processing and response accuracy for enterprise applications powered by Dynamic Agent.
- Successfully deployed and configured ~20 demo applications over 7 months, integrating disparate components like Chunkers (MultiModal Pdf parser, Mew3 Parser), Embedders, query orchestrator, and dynamic agents into cohesive, functional end-to-end products that showcase comprehensive GenAI capabilities.
- Developed AI agent workflows using LangGraph and React Flow, including custom components (e.g., text and visualization nodes) for dynamic execution. Enabled side-panel chatbot interactions to generate nodes/edges on the fly, converting natural language requests into self-executing processes for non-technical users, automating multi-step operations.
- Developed an API to download and integrate Hugging Face embedders into the C3.ai file system, streamlining access to advanced embedding models for enhanced GenAI performance.
- Implemented prompt injection defenses and LLM guardrails, including PII masking, to secure AI interactions and ensure compliance with data privacy standards.
- Performed comprehensive QA testing and wrote automated unit tests, systematically identifying critical issues and creating actionable tickets that enabled successful on-time releases across multiple application versions.

BCBS, NJ

Software Engineer **Jun 2023 – Dec 2024**

- Leveraged Python and Django to develop robust data pipelines for processing and analyzing large healthcare datasets, ensuring data integrity and compliance.
- Optimized database performance using SQL and Oracle for efficient storage and retrieval of records and data.
- Designed and integrated XML-based data exchange formats to facilitate seamless data sharing between healthcare systems and applications.
- Utilized Docker for containerization to streamline deployment and management of applications, ensuring consistency and scalability across different environments.
- Deployed and managed scalable applications on Azure cloud platform, leveraging cloud-based services for improved performance and reliability.

KPMG, India

Software Engineer **Jan 2020 - Aug 2021**

- Developed robust applications using Java and Spring Boot, implementing secure and scalable solutions for transaction processing and data management systems.
- Designed and developed Restful APIs, enabling seamless integration with external systems and facilitating data exchange via JSON payloads, ensuring interoperability and data integrity.
- Utilized Redux for state management in React applications, ensuring consistent and responsive user interfaces for data analysis and

reporting tools.
- Collaborated within the SDLC framework, utilizing Agile methodologies to deliver high-quality software solutions, ensuring adherence to project timelines and client requirements.

EDUCATION

New Jersey Institute of Technology — **Newark, NJ**
Masters in Computer Science — **Sep 2021 – May 2023**

Acharya Nagarjuna University — **Guntur, India**
Bachelor of Technology in Computer Science — **Aug 2017 – May 2021**

TECHNICAL SKILLS

Programming Languages:	JavaScript, TypeScript, Python, Java, SQL
Libraries:	NumPy, Pandas, Matplotlib, Scipy
Frameworks:	Node.js, React.js, PyTorch, FastAPI, Django, Flask, Hibernate, Express.js
Web Technologies:	HTML, SCSS, JavaScript, JQuery, XML, AJAX, JSON, Bootstrap, Restful API, Redux
Cloud Technologies:	AWS, MS Azure
Database:	PostgreSQL, Cassandra, MongoDB
Version Tools:	Git, Kubernetes, Docker
Other Skills:	Jira, Confluence, GitHub
Methodologies:	Agile, SDLC
IDEs:	VS code, Cursor, IntelliJ IDEA
Operating Systems:	MacOS, Windows, Linux

PROJECTS

Online Quiz System | Spring Boot, React, MongoDB Atlas, JWT, Material-UI
- Architected a full-stack quiz platform enabling user-driven quiz creation and participation, with secure JWT authentication and role-based access control.
- Implemented efficient MongoDB document relationships and indexing, achieving sub-100ms quiz retrieval times.
- Engineered a responsive React frontend with Material-UI, featuring real-time score calculation and progress tracking.
- Designed RESTful APIs with Spring Boot, incorporating comprehensive error handling and input validation for robust user experience.

Quotivation Station | React, JavaScript, Express, MongoDB Atlas, Node.js, Docker
- Crafted a user-friendly web app with 1000+ users, lauded for innovative image generation and quote sharing features. Explore at www.siddhardhakurra.com.
- Containerized with Docker Compose for scalable architecture, leading to 15% improved operational efficiency.
- Implemented a compound index on user IDs and timestamps, coupled with and LRU caching, resulting in a 25% reduction in user feed retrieval latency and an overall system responsiveness improvement.

TimeVault App | Django, Python3, web3, Truffle, Ethereum Blockchain, SQLite3
- Engineered a blockchain-based time capsule app with Truffle smart contracts on Ethereum, ensuring tamper-proof security and integrity.
- Developed an intuitive UI with Django and Bootstrap, boosting user engagement by 25%.

Inventory System | Java, J2EE, JPA, JAX-RS, CDI, JSP, JMS, WebSockets, Threads
- Introduced lazy loading for non-essential modules, cutting initial load times by 30% without sacrificing core functionality.
- Implemented Trie-based indexing for product search, boosting retrieval speed by 25% in the Inventory Management System.
- Pioneered real-time chat via WebSockets, cutting inventory issue resolution times by 15%.
- Slashed inventory update duration by 40% through thread pooling, ensuring efficient parallel processing.