NADIGADDA SHIVA SAI
Full Stack Developer

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IIT Kharagpur Alumunus with hands-on expertise in agile methodologies and full software lifecycle management.Targeting challenging assignments in Full Stack Engineering to deliver innovative solutions in a dynamic and collaborative environment.

Profile Summary

- Software Engineer with over **2 years** of experience building scalable web applications using ReactJS, Node.js, Django, and NextJS, with a strong foundation in OOP, design patterns, and software engineering principles.
- Recently explored and implemented **Generative AI solutions** using **GPT (OpenAI)**, **LlamaIndex**, Ollama, and **LangGraph** to build tools that enable document parsing, methodology extraction, and smart agent orchestration for research and enterprise applications.
- Developed a full-stack website for the Rockefeller Foundation project, managing both front-end with **ReactJS** & back-end with **MySQL.**
- Incorporated validation checkpoints with Nemostage APIs, applying solutions to uploaded tag files and updating case responses on Salesforce, leading to a **40% improvement in processing accuracy**.
- Developed and integrated **RESTful APIs using Node.js, FastAPI, and Java Spring Boot**, improving communication between front-end and **back-end** and reducing data latency by 30%, thus boosting application performance and user experience.
- Skilled in developing scalable back-end microservices using Spring Boot, integrating Elasticsearch for efficient data search, and implementing NATS message pusher for real-time communication across distributed systems.
- Integrated data-fetching capabilities with Python, handling Excel data, and building APIs using FastAPI for efficiency.
- Managed database schemas, wrote queries, created prototypes, and used the command line for server management.
- Ensured public accessibility for scientists and government representatives, and overseeing the entire project lifecycle independently.
- Proficient in Java, JavaScript, and development tools like VS Code, Git/GitHub, with a focus on collaborative, high-quality code delivery.
- Resolved **complex issues** by identifying root causes and applying data-driven solutions, improving system performance, reducing downtime, and enhancing user experience.

Core Competencies

Software Development	System Integration	GenAI Tools Integration (GPT, LlamaIndex, Ollama, LangGraph)
UI/UX Development & Software Engineering	User Interface Design	Project Management
MERN Full Stack Development	Performance Optimization	Troubleshooting, Debugging & Statistical Analysis

Technical Skills

Category	Technologies
GenAI & LLM Ecosystem	OpenAI GPT (3.5/4), LlamaIndex, Ollama, LangGraph, LangChain
Programming Languages	Java (8+), JavaScript (ES6+), TypeScript, Python, SQL, Node.js
Front-end Technologies	HTML5, CSS3, Bootstrap, Material UI, React.js, NextJS
Back-end / Frameworks	Spring Boot, Spring Security, Spring JDBC, Microservices, Spring MVC, Spring Data JPA, Express.js, Microservices Architecture, JEE (Java Enterprise Edition)
Cloud & DevOps	Docker, Kubernetes, AWS, CI/CD pipelines with Jenkins, DevOps practices, and release automation
Database Management	MySQL, MongoDB, MariaDB
Version Control	GitHub
Microsoft Office Suite	Word, Excel, PowerPoint

Work Experience

Jul'2023 to May 2025 : Web Developer at CSIR–Centre For Cellular And Molecular Biology (CCMB)

Project: The Rockefeller Foundation Project – Alliance for Pathogen Surveillance Innovations (APSI)
Project Overview:

- As part of the APSI initiative, I contributed to the development of a scalable, multi-institution web platform to track and visualize environmental surveillance data and outreach activities across India. The platform supports real-time data pipelines, interactive dashboards, and secure access for various stakeholders across nodal cities (Hyderabad, Pune, Delhi-NCR, and Bengaluru). Integrated **Generative AI tools** like **OpenAI GPT-4** and **LlamaIndex** to automate summarization and contextual retrieval from large-scale pathogen reports and scientific documents.

Role:-

- Creating asynchronous API endpoints with FastAPI and Node.js to handle high-volume CRUD operations, increasing backend throughput and supporting scalability during peak traffic.
- Building strong relationships with stakeholders and customers by providing specialist advice and support to meet their evolving needs, ensuring satisfaction and timely issue resolution.
- Delivering high-quality work in a timely manner, executing prescribed activities and ensuring both personal performance and surrounding roles contributed to organizational goals.

Highlights:

- Managing risks and strengthening controls within my work area, ensuring adherence to relevant rules, regulations, and codes of conduct to maintain operational integrity.
- Hands-on experience with Generative AI tools and frameworks for building intelligent, research-focused applications. Integrated OpenAI GPT models for conversational agents, LlamaIndex for context-aware document querying and summarization, and LangGraph for building stateful,

multi-agent workflows. Deployed lightweight LLMs with Ollama for local inference, supporting secure, offline experimentation. Applied these tools in projects involving semantic search, multi-modal document understanding, and automated research methodology extraction.

- Designed and deployed a scalable web surveillance platform (APSI), enhancing system reliability by 40% through effective backend architecture and secure data pipelines.
- Automated Salesforce case resolution processes using Salesforce APIs to retrieve case metadata and files, cutting manual workload by 50% and significantly reducing response time.
- Developed secure ETL pipelines using Python to automate data ingestion from Excel sheets into a MySQL database, reducing manual effort by 70% while ensuring data integrity.
- Planned and optimized relational database schemas and MySQL queries, enhancing dashboard performance and reducing data retrieval times.
- Integrated unit, integration, and stress testing into CI/CD pipelines via Jenkins, improving deployment stability and reducing production incidents by 40%.
- Implemented Role-Based Access Control (RBAC) & user authentication systems, improving platform security by 60% & safeguarding data privacy.

Jun'2022 to Oct'22: Software Engineer at Integral Ad Science

Project :- AdTech Data Intelligence Platform
project Overview:
- Worked on a robust AdTech data intelligence platform focused on real-time analytics, ad quality metrics, and brand safety. Designed scalable backend systems and developed end-to-end functionalities for secure data handling, API development, and cross-platform UI interfaces.

Role:
- Built scalable microservices using Java 8, Spring Boot, Spring MVC, and Spring Security, adhering to TDD principles for clean, secure, and maintainable code.
- Developed RESTful and SOAP web services with OpenAPI specifications, ensuring robust, scalable, and well-documented backend interfaces.
- Integrated ORM frameworks like Spring JDBC, Hibernate, and JPA to optimize data access layers and improve query performance across Oracle, MongoDB, and MariaDB databases.
- Designed responsive user interfaces with React.js, JavaScript, TypeScript, ES6, and Bootstrap/Material UI, ensuring seamless user experience across all browsers and devices.
- Authored comprehensive unit and integration tests using JUnit, Mockito, MockMvc, and Karma/Jest, achieving over 90% test coverage and reducing regression issues by 30%.
- Automated deployment pipelines with Jenkins, Docker, and AWS, utilizing container orchestration and pod monitoring with Lens to enhance deployment reliability and scalability.
- Conducted static code analysis with SonarQube and security assessments with Veracode, aligning with enterprise-level coding standards and security protocols.
- Utilized Maven and GIT/GitLab for efficient build management and version control, contributing to more rapid and reliable release cycles.
- Worked within Agile/Scrum frameworks using Jira, Agile Central, and Confluence to manage sprint planning, backlog grooming, and foster cross-functional teamwork.
- Applied Unix/Linux scripting to automate backend processes and streamline environment setup for development and production environments.

Internship

May'2021 to Jul'2021: Full Stack Developer at Smiles.ai
Role:
- Developed and optimized a web application using ReactJS, transitioning it to a NextJS-based platform, improving page load speeds by 45% and boosting SEO scores.
- Led the creation of a "Management System" for administrative use, implementing role-based access restrictions to improve data security by 40% and streamline workflows by 25%.
- Intended a Java-based API layer for dynamic schema extraction from MongoDB, reducing query times by 50% & enhanced data retrieval efficiency.
- Contributed to both front-end and back-end development, ensuring seamless API integration and cross-browser compatibility, while independently coding, debugging, and maintaining technical documentation for efficient knowledge transfer and long-term scalability.

Education

- Integrated (M.Sc. & B.Sc.) (Mathematics and Computing), Indian Institute of Technology Kharagpur, 2022

Professional Affiliations

- **Outstanding Hall Council Member | B R Ambedkar Hall of Residence   (July 2018 – April 2019)**
  Recognized as the Best Hall Council Member for effectively managing hall operations and initiating events such as Illumination and Rangoli, with special commendation for Illumination 2018 under mentorship.
- **Best Fresher | B R Ambedkar Hall of Residence   (July 2017 – June 2018)**
  Honored as the Best Secretary for my exceptional contributions and leadership in B R Ambedkar Hall during the 2017-18 period.
- **Certifications & Achievements**
  Participated in the Source Code Tech Quiz event and received certification in KSHITIJ 2019.

Positions of Responsibilities

- **Gen. Secy., Library | B R Ambedkar Hall, IIT Kharagpur** **(Jul 2018 – Jul 2019)**
  Administered ₹40K budget, led 4-member team, and oversaw library upkeep and procurement coordination.
- **Vice-Captain, Cricket | B R Ambedkar Hall** **(Jul 2019 – Oct 2019)**
  Led hall cricket team to silver medal at IIT KGP sports championship through structured practice sessions.
- **Dance & Events Team | Telugu Cultural Association** **(Jul 2018 – Feb 2020)**
  Organized 7 events with 130+ team members; raised ₹1.5L funding and boosted event footfall by 25%.

Personal Details

Date of Birth: 25th March 1999 **| Languages Known:** English, Hindi & Telugu **| Address:** Hyderabad, 500092, Telangana