

SIVA KRISHNA REDDY PULICHERLA

Full Stack Engineer | End-to-End Web & Cloud Solutions | AWS CERTIFIED | GEN AI

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Summary

Full Stack Engineer with 4 years of experience delivering scalable web and cloud solutions across **Java, Spring Boot, Node.js, and React, Angular** ecosystems. Proven leadership in cross-functional Agile teams, driving on-time delivery, performance optimization, and large-scale data migration (1.4TB DB with 88% size reduction). **AWS Certified** and recently upskilled in **Generative AI Engineering**, with a strong focus on applying AI solutions in real-world applications. Passionate about building high-quality systems that solve critical business problems.

Experience

The KeelWorks Foundation

Cincinnati, OH

Software Engineer

02/2025

Whidbey Water Works, Role: Lead Full Stack Developer | React, Vite, NextJS, Flutter, Express, Firebase

- **Leading the development, System Design and System architecture** of a **Water Utility web application** serving 500+ users, by applying Agile best practices and enforcing code quality standards across the team.
- Crafted user onboarding, profile management and dashboard modules using Nextjs with typescript improving type safety for Frontend and Express.js with Firebase for building Restful APIs with PostgreSQL Database.
- Designing and implementing a **Role-Based Access Control (RBAC)** system using **Spring Boot and Spring Security**, enhancing application security by ensuring that users could only access resources based on their assigned roles.

Hive Networks, Inc

Cincinnati, OH

Software Engineering intern

07/2024 - 10/2024

Learning Healthcare Networks (P2P), Role: Full Stack Engineer

- Implemented bug fixes and developing features using **Vue.js, Quasar, Node/Koa.js, C#, MSSQL, RBAC, Chart.js, TypeScript, GitHub Actions, Yarn** within a Nx monorepo and **microservices** improving team efficiency by at least 25%.
- Collaborated to developing an **Azure OpenAI powered chatbot and AI search** leveraging LLMs and a custom knowledge base, handling 1K+ daily queries and enhancing user experience by 40%.
- Developed a **Tag Suggestion feature** for networks, leveraging **OOPs principles, RESTful API standards**, and ensuring **security best practices** enhancing functionality and user experience.
- **Automated data migration** and schema updates using complex **PL/SQL Queries, Stored Procedures & DDL** reducing migration time by 40% and scripting efforts significantly.
- Partnered with frontend, backend, and DevOps teams in an Agile environment to deliver features on a tight timeline, resulting in a 25% increase in delivery efficiency.

Presidio

Chennai, India

Software Engineer

11/2020 - 07/2023

SBSD - Virginia State Agency project, Role: Team Lead | Angular, React, NodeJS, Spring boot, IBM Cloud, SoapUI, SCSS

- **Led a cross-functional team** managing 6 customer-facing applications, **built 30+ interactive screens & Reusable React Components** using **React, Angular** with backend integration, and leveraged **Docker/Kubernetes** for container orchestration and robust **CI/CD pipelines**.
- Administrated **Java Based Migration Script built using spring boot Rest API** for Relational database migration (1.4 TB) from on-prem to **Box cloud, reducing DB size by 88% and improving efficiency by 65% with zero downtime**.
- Transformed legacy source code for **3 production apps**, including **JasperReports**, improving **runtime performance by 50%**.
- Elevated customer satisfaction by 30% by building and deploying a new feature sets, including **REST APIs using Express.js with WebSockets**, Utilized **IBM Cloud and IBM DB2** for seamless integration.
- Reduced core application load time by 40% by optimizing code, utilizing DB strategies, advanced SQL indexing techniques and implementing **Redis** caching.
- Built scalable REST APIs with **Spring Boot, MVC, JPA** for **SBSD's dashboard system**, powering interactive chart components (**Chart.js**) and secure backend data access with **Auth0 and Spring Security** including RBAC ensuring CSRF/XSS/CSP Protection along with Custom JWT and 2FA implementation.

Codingmart Technologies pvt Ltd.

Coimbatore, India

Product Engineer (Intern + Full-Time)

12/2019 - 10/2020

AllForSports Decathlon, MyGate, OKR HR, React, Next.js, Node.js, PostgreSQL, Material UI, Web Development

- **Enhanced application performance by 30%** by implementing Next.js server-side rendering and code optimization and optimizing styles with **Tailwind CSS**, and verified via Google PageSpeed Insights.
- Ensured **WCAG-compliant accessibility standards** by applying semantic HTML, ARIA roles, and keyboard navigation, enhancing user experience for all users.
- Built Single Page Applications (SPA) UI Website for over 3 clients using **CSS3, HTML5, SCM, and React, Hooks, Redux with webpack**; websites **scoring over 85** on Lighthouse by performance tuning and improved visits by 25% through SEO Optimization.
- Innovated an automatic event time slots booking module using **Vanilla JavaScript**, Data structures improving User Experience.
- **Collaborated with cross-functional teams** to deliver responsive UI components using Material UI and integrated REST APIs with PostgreSQL backend, streamlining user workflows across platforms.

Education

University of Cincinnati

Masters of Engineering, Computer Science | GPA: 4 / 4

Cincinnati, OH

08/2023 - 12/2024

- **Coursework:** Cloud Computing, Advanced Algorithms, Software Architecture, Software Quality Assurance, Data Encoding.

Anna university

Bachelors of Engineering, Computer Science and Engineering | GPA: 3.5 / 4

Chennai, India

05/2016 - 09/2020

- **Coursework:** Artificial Intelligence, Compiler Design, Operating Systems, Database management, Programming and Data structures, Object Oriented Design and Analysis, Distributed Systems

Skills

Front End: React, Redux, Next.js, Angular, HTML, CSS, JavaScript, ES6/ES7, Accessibility Standards, Tailwind, Bootstrap, Jest, Cypress, Context API

Back End:

Node.js, Express.js, Spring Boot, Spring MVC, Spring JPA, WSDL/SOAP, Hibernate, AWS Lambda, CloudTrail, CloudWatch, Route 53, EC2, ECS, API Gateway, Cognito, Microservices, JWT, Auth0, GraphQL (Basics), Mocha, JUnit, OAuth

Database:

PostgreSQL, MySQL, NoSQL, Relational Database Management services, IBM DB2, MSSQL, AWS (S3, RDS, DynamoDB), MongoDB, Redis, Elasticache, Hibernate, JPA, Stored Procedures.

Tools & DevOps: Git, Docker, AWS IAM, ECS, Jenkins, Azure DevOps, Maven, Gradle, NPM, Postman, Jira, VS Code, IntelliJ, Nginx

Programming Languages: Python, Java, C/C++, Object Oriented Programming, Data Structures & Algorithms.

ML/AI Skills: LangChain, Generative AI, RAGs, Prompt Engineering, TensorFlow (Basics), PyTorch (Basics)

Other skills:

Leadership, Confluence, Project management, Mac/Windows/Linux, Agile Methodologies, SCRUM, SDLC, Code Reviews, Problem Solving, Debugging, Cross-Functional Collaboration, Design Patterns, SOLID Principles, API Documentation, Technical Documentation

Certification

AWS Certified Solutions Architect – Associate — Amazon Web Services (AWS)

IBM Certified AI Engineering Professional — IBM

Python & C/C++ NPTEL certified — NIIT

Microsoft Azure AI Fundamentals certified — Microsoft

Projects

Desktop AI Assistant (FRIDAY)| Python, TensorFlow, OpenCV, Tkinter, Deep Learning (Publication IEEE/Scopus)

- Engineered a voice-based digital desktop assistant using **Python**, Deep Neural Networks, **NLP**, and **TensorFlow**; improved user engagement by 45% and reduced manual task completion time by 60%.

Private Document Summarizer | LLMs, GPT-4, Transformers, Word2Vec

- Achieved up to 85% reduction in manual reading time for large private PDFs.
- Composed the backend in Python with Hugging Face transformers, datasets, PyMuPDF, and tokenizers with LLMs like GPT, Llama.

RAG AI Agent QA BOT | LangChain, RAGs, IBM Watsonx, Gradio, Transformers, LLMs.

- Created a **RAG**-based QA Bot that processes large documents and answers queries 10x faster, boosting efficiency using Generative AI.
- Programmed an **AI Agent** using **LangChain** and RAG using **HuggingFace** and **PyTorch** to summarize a private document which saves 70% of time, it also acts as a QA bot.

Web App (Student management portal for my College) | PHP, Bootstrap, HTML, CSS, Laravel Framework

- Conceptualized and created a comprehensive web-based student management system, featuring user authentication, data tracking, and administrative tools easing the processing speed by 60% for students management.

Smart India Hackathon (PHP, WordPress, MySQL, XAMPP Server) | 2018 Finalist

- Built an online live school education portal with video streaming and course management and was runner-up.