KARNAM SHYAM

Student, Aspiring Full-Stack Developer Powered by AI/ML, DevOps and Blockchain Insights

+91 9346872174 | shyam.karnam2004@gmail.com | linkedin/in/karnamshyam2004 | github/KarnamShyam1947 |
leetcode/KarnamShyam2004 | hackerrank/KarnamShyam2004 | portfolio

Education

VIT-AP University | Current CGPA : 8.99   Nov. 2021 - present
Integrated MTech in Computer Science   *Amaravathi, Andhra Pradesh*

DR Junior Collage | Marks : 961/1000   **Aug 2019 - May 2021**
Intermediate, MPC   *Vizag, Andhra Pradesh*

Technical Skills

Languages: Python, C, C++, Java, HTML, CSS, JavaScript, SQL(MySQL, SQLite, PostgreSQL), MongoDB
Frameworks & Libraries: Flask, Spring Boot, React, Bootstrap, Tailwind CSS, Hibernate, TensorFlow, scikit-learn, NumPy, Pandas
DevOps & Cloud Computing: Git, Jenkins, Docker, Terraform, kubernetes, ArgoCD, GitHub Actions, SonarQube, Maven, AWS, Grafana, Prometheuse
Blockchain Development: Hardhat, Ganache
Others: DBMS, Linux,OS concepts, OOPs, data structures, algorithms, computer architecture, SDLC and computer networks.

Work Experience

Freelancer | *Self-Employed*   **Feb 2025 - present**

- Consistently delivered high-quality results on time while meeting the client's requirements and maintaining confidentiality.
- Applied advanced problem-solving techniques to address specific client needs, improving operational efficiency, and delivering actionable insights.
- Developed innovative solutions to streamline workflows, reduce costs, and enhance service delivery for clients across diverse industries.
- Collaborated with the Honorable Police Department of Andhra Pradesh, providing solutions to address real-world challenges.

Projects

Spring Boot Microservices EHR Management | *Maven, SpringBoot, SpringCloud, Design Patterns* **Fed 2025 - Present**

- Developed a Spring Boot-based microservices architecture for an Electronic Health Records (EHR) management system to enhance scalability and performance.
- Implemented Service Discovery (Eureka), API Gateway (Spring Cloud Gateway), and Config Server to streamline service orchestration and centralized configuration management.
- Utilized Feign Client for efficient inter-service communication and Zipkin for distributed tracing to monitor and debug microservices interactions.
- Applied best practices in microservices design patterns, including circuit breaker (Resilience4j), event-driven architecture (Kafka), and database per service to ensure fault tolerance and data consistency.
- GitHub - KarnamShyam1947/springboot-ehr-api-microservices

Supply Chain Management using Blockchain | *Blockchain, React.js, Hardhat, Metamask* **March 2025 - present**

- Developed and deployed a decentralized application (DApp) using React for the frontend, providing real-time visibility into the supply chain.
- Implemented blockchain-based smart contracts using Hardhat, enabling transparent and immutable tracking of products across the supply chain.
- Utilized Ganache for local Ethereum blockchain simulation to test smart contract interactions in a secure and isolated environment.
- Ensured scalability and security of the DApp through thorough testing and optimization, providing a reliable solution for real-time supply chain management.
- Integrated MetaMask for user authentication and interaction with the blockchain, allowing users to securely manage their transactions and data.
- GitHub - KarnamShyam1947/smartcontract-supplychain

NLP-Based Resume Parser | *Java, Springboot, Python, NLTK, SpaCy, Flask, REST API* **May 2024 - Aug 2024**
- Engineered a full-stack application for automated resume parsing, minimizing HR review time by 30 minutes per candidate.
- Integrated OAuth authentication and Spring Security for robust access control.
- Utilized Python (NLTK & SpaCy) for resume text extraction, entity recognition, and categorization, achieving 95% accuracy in candidate skill matching and qualification extraction.
- Expanded a REST API using Flask to seamlessly integrate resume parsing functionality, enabling real-time data processing and interaction with front-end systems for efficient candidate evaluation.
- GitHub - KarnamShyam1947/resume-parser-nlp | KarnamShyam1947/springboot-resume-parser

REST API for Healthcare | *Java, Springboot, MySQL, Docker, AWS, SonarQube* **April 2024 - July 2024**
- Improved a Spring Boot REST API for managing doctor appointments and patient medicine deliveries, improving appointment scheduling efficiency by 25%
- Designed and implemented RBAC for API endpoints (Admin, Doctor, Patient) to restrict access based on user roles, while utilizing JWT (JSON Web Tokens) for secure authentication and authorization, ensuring that only authorized users could access sensitive data.
- Set up CI/CD pipelines to automate code deployment, ensuring rapid updates and reducing bug fix turnaround time by 30%. Also integrated Prometheus and Grafana for real-time monitoring and alerting on critical conditions, ensuring proactive issue resolution and improving application uptime by 15%.
- Created an AI-powered healthcare chatbot leveraging Large Language Models (LLM) and Retrieval-Augmented Generation (RAG) techniques.
- GitHub - KarnamShyam1947/springboot-rest-api

Secure DevSecOps CI/CD Pipeline | *Maven, Terraform, Jenkins, AWS* **March 2025 - present**
- Designed and applied a secure DevSecOps pipeline, integrating Jenkins for CI and ArgoCD for CD, reducing deployment time by 30% and ensuring faster, more secure application delivery.
- Integrated Trivy container scans and OWASP Dependency-Check, resulting in the identification and remediation of over 50+ security vulnerabilities in code dependencies and container images before production deployment.
- Automated Infrastructure as Code (IaC) with Terraform, managing over 20+ cloud resources and reducing provisioning time by 40% while ensuring consistency and repeatability across environments.
- Utilized SonarQube to conduct continuous code quality and security scans, improving code quality and reducing defects by 20% across the application codebase.
- GitHub - KarnamShyam1947/gitops-project

Publications

Transfer Learning for Bird Species Identification **Jan 2023 – June 2023**
- created an innovative IoT-based solution leveraging deep learning techniques to monitor Bird Species in real-time
- Achieved 95% accuracy across 200 bird classes in a 10,000-image dataset.
- https://ieeexplore.ieee.org/abstract/document/10142979

A Federated Learning Approach for Brain Tumor Classification **June 2024 – Jan 2025**
- Implemented the Federated Learning technique in medical department, which enhanced the data privacy
- Your research and experiments on new AI algorithm and architecture lead to achieving high 91% training accuracy and 88% test accuracy.
- https://link.springer.com/chapter/10.1007/978−981−97−8336−6_20

Certifications

Introduction to Linux. From LinuxFoundationX | Link **July 2024**
AWS Cloud Technical Essentials from AWS | Link **July 2024**
Introduction to Kubernetes. From LinuxFoundationX | Link **June 2024**
Blockchain: Understanding Its Uses and Implications. From LinuxFoundationX | Link **July 2024**