VENKATA SATYA KOPPULA

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WORK EXPERIENCE

Scale infinite | Software Developer | Internship**:** November 2022 – November 2023

- Engineered and deployed scalable **RESTful APIs** using **Flask**, **Docker**, and **Kubernetes**, optimizing application performance and enhancing user experience, resulting in a 30% reduction in response times.
- Refactored over 20 code components by optimizing **PostgreSQL** queries and improving SQL logic, achieving approximately a 40% reduction in application load times and enhancing reliability and maintainability.
- Developed 50+ unit tests using the PyTest framework, increasing code coverage from 60% to 85% and reducing production bugs by 30%, ensuring robust functionality and minimizing regressions.
- Implemented frontend caching techniques using **PHP and jQuery** to reduce API response times from 150–250ms to 10–20ms, significantly enhancing performance.
- Diagnosed and resolved backend inefficiencies through a custom **Python script**, automating the reclamation of unused public IP addresses and streamlining the process, resulting in over 50 IP addresses reclaimed monthly.
- Influenced significant technical directions through ongoing dialogue and hands-on contributions during strategy sessions led by senior management; provided actionable recommendations based on real-time system performance metrics reviewed weekly.

SKILLS & TOOLS

Languages: Java, Python, C/C++, JavaScript, TypeScript, PHP, Go, Rust, Bash, HTML5, CSS3.
Database Systems: SQLite, NoSQL (MongoDB), MySQL, DynamoDB.
Tools: Postman, CI/CD (Jenkins, Circle CI), GitLab, Git, GitHub, Grafana, Prometheus, Redis.
Frameworks: Kubernetes, Angular, Vue, Django REST framework, Django, Tailwind CSS, Docker, PyTest, Jest (JavaScript Testing Framework), GraphQL, Hadoop, Spark, Flask, Socket.io, ExpressJS, Swagger UI.
Platforms: Linux/Unix (CentOS, Debain), Windows server.

PROJECTS

Final Year Project: Intelligent Book Locator System: Python, Django REST API, Bootstrap, PHP, jQuery

- Built a scalable backend system using Django REST Framework (DRF), reducing API response time by 40% through Nginx caching, improving uptime to 99.9% and mitigating 95% of malicious traffic.
- Engineered a responsive web application front-end with PHP and jQuery, enhancing user engagement metrics by 35% through improved navigation and interactive features tailored to diverse user needs.

Movie Playlist Manager: Python, Bootstrap, JavaScript

- Designed and developed a full-featured web application as a personal project, enabling user registration, login, movie search, personalized playlists, and public link sharing, demonstrating expertise in building scalable and user-centric platforms.
- Integrated the OMDB API to fetch movie details dynamically, processing 5,000+ API requests during development. Built a responsive web application using Django and Bootstrap, deployed successfully on a Linux server with Apache2, achieving 99.9% uptime and demonstrating scalability for up to 1,000 concurrent users.

EDUCATION

Master of Science: Computer Science, The State University of New York at Buffalo, Buffalo, December 2024
Bachelor of Engineering: Computer Science & Engineering, VIT , Vellore, India, May 2023

PUBLICATIONS

A Study on Modern Methods for Detecting Mobile Malware, IRJET, India

- This study evaluates various malware detection methods, highlighting the most effective approaches for Android and iOS. A review of 218 research papers analyzes innovative techniques, offering insights into advancements in mobile malware detection.