SANOSH JACOB

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Technical Skills

Languages: Python, JavaScript, C, C++, Java, HTML5/CSS3, TypeScipt, SQL, Golang
Technologies/Frameworks: ReactJS, Node.js, Express.js, Django, FastAPI, Tailwind CSS, Bootstrap, Next.js, jQuery, MongoDB, PostgreSQL, MySQL
Cloud/DevOps and Tools:AWS Services, Docker, Git, Bitbucket, Streamlit, Linux
Concepts:Distributed Systems, Scalability, System Design, Security, CI/CD, Data Mining, Algorithms, Large-scale Computing

Experience

Rootflo   **October 2024 – present**
Associate Software Engineer   *Bengaluru, Karnataka*
- Designed and developed scalable backend services in a distributed architecture using FastAPI, MySQL, AWS, and GCP to support critical CRM features for clients like Muthoot Finance and Muthoot Fincorp.
- Built a full-stack application from scratch using React, Tailwind CSS, and TypeScript, delivering a clean, responsive UI and high-performance modules with maintainable, modular architecture.
- Built a Dynamic Query Executor tool that reduced deployment time from over 3 minutes to just 3 seconds by leveraging AWS S3 buckets for efficient query storage, retrieval, and caching.
- Implemented efficient data fetching and caching using React Query (QueryClient), significantly reducing redundant API calls and enhancing front-end responsiveness.
- Engineered unit tests with pytest to achieve 85% code coverage and integrated metric-driven monitoring for reliability and continuous auditing.
- Conducted load testing using Locust to identify bottlenecks under high-load conditions and improved service scalability.
- Automated CI/CD pipelines using Docker and Git-based workflows, reducing release cycle time by 40% and ensuring software compliance.

CodeHall   **July 2024 – August 2024**
Software Engineer Intern   *Bengaluru, Karnataka*
- Developed and integrated event scheduling capabilities by connecting OCP with Google Calendar API using FastAPI and React.js.
- Enhanced backend architecture with MySQL and Docker to enable secure and scalable calendar-based functionalities.
- Wrote unit tests using pytest, achieving 97% code coverage and improving scheduling reliability and accuracy.

Labour Commissionerate – Government of Kerala   **August 2023 – November 2023**
Backend Developer Intern   *remote*
- Developed Karmachari, a platform to streamline the campus recruitment process across Kerala, addressing the communication and coordination challenges between companies and campuses.
- Implemented hierarchical registration and verification for students, colleges, and companies using Next.js for the frontend, Node.js for the backend, and MongoDB with MinIO for storage.
- Enhanced recruitment coordination, reducing processing delays by 25% and improving the accuracy of opportunity distribution across participating colleges.

Projects

Student Monitoring System | *Python, CNN, Keras, TensorFlow, Streamlit*   **May 2024**
- Designed a student monitoring system to evaluate students' understanding during class using CNN, TensorFlow, Keras, and Streamllit.
- Implemented emotion recognition from student images and mapped these emotions to levels of understanding, achieving 76% accuracy on Indian faces.
- Improved real-time feedback on student engagement and comprehension, enhancing classroom interaction and learning outcomes.

AI Voter | *ReactJS, Django, Firebase, PostgreSQL*   **June 2023**
- Created "AI Voter," a voting system with facial recognition and phone number verification using CNN, Django, React, Firebase, and PostgreSQL.
- Achieved 68% accuracy in facial recognition, effectively integrating with phone number verification for enhancing security.
- Improved voting system security and reliability, increasing user confidence and trust in the process.

Education

Govt. Model Engineering College   **June 2020 – July 2024**
B.Tech in Computer Science Engineering, CGPA:8   *Kochi, kerala*