Emmanuel Allan M J

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EDUCATION

Vellore Institute of Technology Chennai

BTech Computer Engineering; CGPA: 9.23

Alwin Memorial Public School

Chennai, India

Chennai, India

Chennai, India

12th CBSE Board: 95% — 10th CBSE Board: 93.6%

2007 - 2021

EXPERIENCE

Ministry of Electronics and IT

Remote

Full Stack Developer

Oct 2023 - Present

- Architecture: Architected a scalable Next.js front-end within a Turborepo monorepo structure, implementing a robust code execution platform with Jupyter Notebook and H5P integrations. Developed a LeetCode-style platform featuring public and private test cases.
- Infrastructure: Implemented critical components including RBAC, package registry management, and Docker containerization to enhance security and streamline deployment. Managed private package registry and optimized build steps
- CI/CD: Contributed to CI/CD pipeline development, including automated end-to-end testing and snapshot testing. Implemented Docker for deployment, versioning, and publishing of the project.
- Performance: Conducted load testing using Locust to optimize performance and ensure efficient load distribution.
 Performed extensive testing on Judge0 for 3,000 concurrent users, ensuring system stability and responsiveness under high loads.
- **API Development**: Developed and maintained 30 API endpoints using OpenAPI configuration and graphql endpoints, enhancing system functionality and integration with type-safety.
- AI Integration: Integrated Llama 3 Mistral model using Ollama for natural language processing capabilities.
- Chatbot: Designed and implemented a chatbot, leveraging AI technologies for interactions and support.

Steam Troops Innovation Lab

Chennai, India

Full-Stack Developer Intern
Led a team of 5 developers in designing and developing a **content management system** (CMS). Architected and implemented a responsive front-end application using Next.js, ensuring **optimal user experience**. Streamlined the deployment process using **Docker containers** and **AWS infrastructure**.

ISRO URSC Bangalore

Bangalore, India

Trainee
Leveraged concurrency and shared memory techniques to build high-performance data interfaces for telemetry software. Efficiently captured real-time data, implemented effective buffering, and ensured accurate time synchronization for reliable insights.

Projects

- PostIt Next.js Typescript MySQL Redis Azure: Developed a social news aggregation and discussion website with posting and voting features. Implemented server-side rendering with Next.js for improved performance and SEO. Utilized MySQL for persistent storage and Redis for caching to enhance read performance. Deployed on Azure.
- Food Ordering App Node Express MongoDB EJS Stripe NodeMailer Multer Pdfkit: Node.js-based web application that attempts to simplify company order administration. It offers a dependable and scalable system for handling client orders, inventory, and sales data.
- e-KYC Verifier (EVS) OpenCV DeepFace Flask Next.js Azure Docker: Built a face recognition and authentication system for secure identity verification. Leveraged OpenCV and DeepFace for facial recognition algorithms. Developed a Flask backend API for processing and a Next.js frontend for user interaction. Implemented Docker for containerization and deployed on Azure for scalability and reliability. Ensured GDPR compliance for handling sensitive biometric data.

TECHNICAL SKILLS & CERTIFICATIONS

• Front-End: Tailwind, TypeScript, React, Next, React Native

Back-End: Node, Express, Flask, Django, Go

• DevOps: AWS, Azure, Docker, Kubernetes, GitLab CI

Tools: Git, GitLab, MongoDB, PostgreSQL, Redis

- AWS: Certified Cloud Practitioner (CLF-C02), Solution Architect Associate (SAA-C03)
- Coursera: Machine Learning Specialisation (Stanford)

 Udemy: Docker and Kubernetes using EKS and ECS

Leadership & Activities

- Google Developer Student Club: Selected as Web Dev Lead. Led the team to win Best Technical Club award. Helped conduct DevHouse, VIT's flagship hackathon, with 70k cash prize, 10k unique registrations.
- TechnoVIT'23: Head of Website Development; Led team in creating website for technical fest, attracting over 10k visitors
- Microsoft Learn Student Ambassador: Empowered peers with latest technology knowledge, focusing on Azure, Microsoft technologies
- Events: Organized and conducted educational events on OpenCV, Next.js, and Redis to enhance peer learning