

Vaisakh Nalu Purakkal

Software Engineer

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EXPERIENCE

Rivi Ventures

Software Development Engineer

Remote
July 2023 – Present

Front End Developer Intern

Jan 2023 – July 2023

- Engineered resilient **gRPC** microservices using Dependency Injection and Factory Design Patterns for scalable service creation. Implemented Circuit Breaker patterns for enhanced fault tolerance and managed protofile schema evolution within a **Kafka** based event-driven architecture, reducing downtime and improving data reliability.
- Integrated LLMs into core services, driving AI-driven insights, refined recommendation algorithms using collaborative and content-based filtering, resulting in an improvement in recommendation accuracy.
- Implemented **JWT/OAuth2** server-side authentication with Zero Trust principles. Optimized SSR pipelines and **Redis** caching layers using Cache-Aside and Write-Through strategies, resulting in a 30% reduction in page load times.
- Led the creation of a templating system using a headless **CMS** to achieve modular content delivery, improving deployment speed and content update frequency.
- Designed a cross-platform **React Native** app implementing real-time video streaming for content delivery, geofencing, region highlighting, custom map layers and interactive annotations to provide rich, contextual data visualization and user engagement.

Technoculture

React Native Intern

Remote

Nov 2022 - Feb 2023

- Ported a project from BabylonJS to React3Fiber, resulting in a significant reduction in load time from 15 seconds to just 3 seconds.
- Increased the React Native app performance by implementing streamlined algorithms by 55%.

Evolvfit

Software Developer Intern

Remote

Mar 2022 - July 2022

- Created 5+ reusable components for the mobile app, resulting in a reduction in development time.
- Produced complex web screens with event handlers and timeouts, improving application reliability by 43%.

Aero Telecom Solutions

Application Development Intern

Remote

Oct 2021 – Jan 2022

- Formulated efficient scripts that reduced manual input for web scraping and data extraction.
- Processed over 100 PDF documents into MongoDB, increasing efficiency by 75%.

SKILLS

- Frontend:** React, React-Native, NextJS, ThreeJS, TypeScript, Redux, SCSS
- Backend:** Node.JS, ExpressJS, Jest, TypeScript, Prisma
- Developer Tools:** gRPC, Algolia, Git, Expo-CLI
- Databases:** MongoDB, PostgreSQL, Redis

EDUCATION

Indian Institute of Information Technology, Kottayam

B.Tech - Computer Science and Engineering

📍 Kerala, India

📅 2019-2023

🎓 SGPA: 8.54

Delhi Public School, RK Puram

Higher Secondary Education

📍 New Delhi, India

📅 Graduated 2019

🎓 Grade: 94%

PROJECTS

- 🔗 **Personal Portfolio:** A responsive portfolio, integrating particle and text animations, custom cursor using NextJS, FramerMotion.
- 🔗 **Blog Site:** Developed a CMS-powered blog site with comprehensive CRUD functionality, content formatting and sanitization.
- 🔗 **Virtual Assistant:** Constructed a Python-based chat bot assistant that executes basic desktop actions and advanced features like voice-controlled social media messaging.

PUBLICATIONS

- 🔗 **Enhanced Brain Tumor Classification with Inception V3 and Xception Dual-Channel CNN**
Evolutionary Artificial Intelligence (ICEAI 2023)