

Eranga Madapathage

Software Engineer | Backend & Full-Stack | Applied AI

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Software Engineer with 6+ years of experience building scalable backend and full-stack web and mobile applications using MERN, Flutter, and React Native. Holds an MSc in Data Science & Artificial Intelligence from Edge Hill University and a First-Class BSc in Computer Science. Experienced in delivering high-performance systems, leading development teams, and integrating applied AI and machine-learning solutions into production environments.

Work experience

Software Engineer (Senior) – Efito Solutions (Pvt) Ltd, Sri Lanka

Aug 2023 – Sep 2024

- Led development of Zulu Courier web app and Fan Budget admin dashboard (MERN stack), streamlining delivery workflows and improving operational efficiency by 30%.
- Built Compatible1 and Fan Budget mobile apps (Flutter, Node.js) integrating Socket.io & ZegoCloud for real-time communication and AI-enhanced call management.
- Developed and integrated scalable REST APIs (Node.js/Express.js), reducing average response times to <200ms while supporting 10K+ users.
- Mentored and trained 5+ junior developers, improving team productivity and code quality (20% fewer defects).
- Applied agile practices to accelerate release cycles and maintain high-quality deliverables.
- Implemented AI-assisted coding workflows using Copilot and OpenAI APIs.
- Worked on a food bank management platform (HungerLink), building a React.js back-office and optimising backend APIs, improving performance by ~25%.

Software Engineer & Technical Support Engineer – LAYOUTindex UK Ltd, Stevenage (SL Development Centre)

May 2021 – Jun 2023

- Engineered and maintained applications in React Native, React.js, Node.js, and PHP across key projects including EventsX, CineSync, Dogota, Syscolabs Web, and OnlineAccounting, delivered in collaboration with the UK office.
- Worked directly with UK-based clients, providing enterprise-level technical support, diagnosing complex infra/software issues, and ensuring 99% system uptime across mission-critical platforms.
- Balanced dual responsibilities as a developer and support engineer, managing multiple priorities and delivering high-quality work under tight deadlines.
- Collaborated with UK product managers, designers, and developers to build scalable, secure, and user-centric solutions aligned with UK business requirements and engineering standards.

Associate Software Engineer – EMP (Pvt) Ltd, Sri Lanka

Feb 2018 – Mar 2021

- Supported ERP (SAP + MS SQL Server) enhancements, improving workflow efficiency by 15%.
- Reduced system errors and improved reliability through process optimization.
- Maintained core IT infrastructure (Active Directory, DNS/DHCP, servers, backups).
- Provided day-to-day IT support to staff, resolving networking/software issues and minimizing downtime.

Education

- **MSc. Data Science & Artificial Intelligence** - Edge Hill University, Lancashire (2024 -2025)
- **BSc (Hons) Computer Science (Software Engineering)** – University of Wolverhampton – First Class (2022 -2023)
- **Higher National Diploma in Computing (Software Engineering)** – Pearson BTEC (2018 -2020)

Technical Skills

Frontend Development

- React.js, Next.js, React Native, Flutter
- Redux, Redux Toolkit
- HTML, CSS, Tailwind CSS, Bootstrap, Material UI

Backend Development

- Node.js, Express.js
- Python (FastAPI, Flask)
- PHP (Laravel)

AI, Data & Machine Learning

- **Core Concepts:** Machine Learning, Deep Learning, Natural Language Processing (NLP), Computer Vision, Data Preprocessing, Model Evaluation, Feature Engineering
- **Frameworks & Libraries:** TensorFlow, PyTorch, Scikit-learn, LangChain, Hugging Face Transformers
- **Generative & Agentic AI:** Generative AI, Large Language Models (LLMs), Agentic AI Systems, Prompt Engineering, AI Workflow Automation, Agent- Oriented Architecture
- **Models & Local LLMs:** Ollama-based LLMs (LLaMA, GPT-OSS, Mistral, Phi), OpenAI GPT models, Claude (Sonnet), Custom model fine-tuning & evaluation
- **APIs & Tools:** OpenAI APIs, Ollama, Hugging Face Hub, GitHub Copilot, Model Deployment & Inference optimization

Testing

- Jest, PyTest
- Unit & Integration Testing

System Design

- RESTful Architecture & API Design
- Microservices Architecture
- Scalability & Performance Optimization
- Basic UI/UX Principles

Agile & Collaboration

- Agile/Scrum, Jira, ClickUp, Asana
- Code Reviews & branching strategies

Databases

- MySQL, MongoDB, PostgreSQL, SQLite
- SQL/ NoSQL
- Firebase

Programming Languages

- JavaScript, TypeScript, Python, Dart, PHP

Cloud, DevOps & Tools

- Git, GitHub, GitLab, Bitbucket
- Docker
- Firebase
- CI/CD Pipeline (GitHub Actions, GitLab CI)
- AWS (lambda, EC2, S3, API Gateway, CloudWatch)

Tools & Integrations

- Stripe, PayPal, Socket.io, ZegoCloud, REST API integrations, Redis

Additional

- Technical Support, ERP (SAP), Computer Hardware & Networking

Achievements

- Research paper publication in IEEE Xplore "Smart Health App for Identifying Brain Tumors" | 2023 IEEE 8th International Conference for Convergence in Technology (I2CT) Available at: [Link to the paper](#)