

KAMALESH SUBRAMANIAM

Software Engineer

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🔗 GitHub: <https://github.com/KaMaLeSh-junior>

🔗 Portfolio: <https://kamalesh.tech/>

PROFESSIONAL SUMMARY

Results-driven Software Engineer with 4.5+ years of experience designing, developing, and deploying scalable full-stack applications. Expertise in different technology, technical skills are listed below

TECHNICAL SKILLS

Frontend: React.js, HTML5, CSS3, Tailwind CSS, Material UI, JavaScript

Backend: Node.js, NestJS, Express.js, Laravel PHP, Python (FastAPI)

AI & Machine Learning: Small Language Models (SLM), TinyLlama, Retrieval-Augmented Generation (RAG), FAISS, Sentence Transformers, AI Chatbots, Document Intelligence

Databases: PostgreSQL, MySQL, Oracle SQL, SQLite

DevOps & Tools: Docker, Jenkins, Ansible, Git, CI/CD Pipelines

Real-Time Systems: WebSockets, Event-Driven Architecture

Monitoring: Grafana, Custom Alerting Systems

Security: JWT Authentication, API Security, OAuth

PROFESSIONAL EXPERIENCE

Software Engineer

Tata Consultancy Services (TCS)

Jan 2023 – Present

- Designed, optimized and improving performance and reducing manual process.
 - Suggested AI based incident automation system to reduce incidents on the same pattern.
 - Developed and maintained responsive UI using React.js integrated with NestJS backend services.
 - Automated deployment pipelines using Jenkins and Ansible, reducing manual effort and release time.
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Software Developer

Verbinden Communications

Apr 2022 – Sep 2022

- Built full-stack applications using React.js, Laravel, Node.js, and PostgreSQL.
- Developed RESTful APIs and integrated third-party services (payment gateways, delivery systems).
- Implemented JWT-based authentication for secure user management.
- Designed a chatbot-based automation system to improve user support efficiency.

Associate Software Developer

Pofi Technology

Feb 2021 – Mar 2022

- Developed backend services using Laravel, Node.js, and MySQL/PostgreSQL.
 - Integrated third-party services including Twilio, Razorpay, and OAuth providers.
 - Built multi-language UI systems supporting RTL and LTR layouts.
 - Delivered production applications including grocery, rental, and booking systems.
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Software Engineering Intern

Appin Technology Lab

May 2020 – Oct 2020

- Assisted in backend development using PHP and MySQL.
 - Improved query performance and contributed to responsive UI design.
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PROJECTS

AI Chat Bot for Document Interaction

Portfolio site: <https://kamalesh.tech/>

Github: <https://github.com/KaMaLeSh-junior/smallLanguageModel>

- RAG based tiny llm with 1.1B parameter based 'tinyllama-1.1b-chat-v1.0.Q4_K_M.gguf'
 - FAST API for the api, sentence transformer for converting the text to vector, fiass for converting document to vector based data.
 - Small Language Models are used in areas where the Server capacity and computing resources are less. Example areas like edge computing.
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Event Booking System (Tech Stack: Node.js, React.js, PostgreSQL)

Github: <https://github.com/KaMaLeSh-junior/Event-Booking-Application>

- Developed a scalable event booking platform with calendar-based scheduling and slot management.
 - Implemented real-time booking validation to prevent conflicts and duplicate reservations.
 - Designed efficient REST APIs and optimized database queries for performance.
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Blog Application (Tech Stack: Node.js, NestJS, React.js, PostgreSQL)

Github: <https://github.com/KaMaLeSh-junior/blog-weaver>

- Building a full-stack blogging platform with authentication and role-based access control.
- Implemented secure JWT-based authentication and modular backend architecture using NestJS.
- Designed scalable frontend using React.js.

Real-Time Bulk Data Processing & Notification System (Tech Stack: Python (FastAPI), Laravel PHP, WebSockets)

- Developed a system to process large CSV datasets with validation, transformation, and storage.
 - Implemented real-time notifications using WebSockets for live processing updates.
 - Integrated Laravel backend with Python FastAPI microservice for event-driven communication.
 - Designed scalable architecture for high-volume data processing workflows.
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EDUCATION

Master of Business Administration – Project Management

Graduated: June 2024

Bachelor of Science – Physics

Graduated: April 2020

CERTIFICATIONS & ADDITIONAL SKILLS

- Certified CAD Designer (AutoCAD 2D)
 - Industrial Machine Design using CAD/CAM tools
 - Solar Cooking Research Project
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LANGUAGES

Tamil (Native)

English (Proficient)

German (Beginner)
