

SAKTHIVEL MADHU

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PROFESSIONAL SUMMARY

Backend Engineer with **3+ years** of experience designing and shipping **large-scale, automation-first enterprise platforms** across procurement, finance, and HR domains. Deep expertise in **Java 17, Spring Boot, microservices, event-driven architecture, and high-throughput REST APIs** on **GCP**. Proven track record of delivering **fault-tolerant, production-critical systems** with measurable business impact — including **92% reduction in manual data entry, 80% faster inventory onboarding**, and full ownership of ERP, HRMS, and Finance modules from system design to production. Strong background in **distributed systems, API design, system design, and cross-functional technical leadership**.

PROFESSIONAL EXPERIENCE

- Twinleaves Retail Ecommerce India Pvt. Ltd.** Bangalore, India
Software Development Engineer May 2024 – Present
 - Purchase & ERP Platform** — Led full-lifecycle development of enterprise **Purchase Order Management** covering PR, PO, GRN, billing, payments, returns, replacement inwards, and **inter-company purchase workflows** (auto-creation of PO, SO, GRN). Designed **Express Purchase** workflow combining PO, GRN and put-away, cutting inventory onboarding time by **80%**. Integrated **Doc-AI** via AI/LLM API, reducing manual data entry by **92%**. Implemented government-compliant **E-Invoicing** for Malaysian regulations, eliminating **80%** of manual invoice generation effort.
 - HRMS — Facial Recognition, Attendance & LOP System** — Architected an HR attendance platform with **facial recognition-based check-in/out** for identity verification, **geo-fencing** for location-based attendance policies (office/field/remote), and automated **LOP (Loss of Pay) calculation** driven by leave balances, shift schedules, and attendance gaps. Built real-time attendance dashboards, shift management, and payroll-linked LOP reporting, eliminating manual HR effort and ensuring workforce compliance across distributed teams.
 - Vendor Management System** — Built a centralized vendor onboarding and compliance platform with automated **GST, PAN, and bank account verification** via third-party integrations through **API Gateway**. Designed configurable **Terms of Trade (TOT)** engines supporting item-level pricing rules, return policies, and delivery location constraints tightly integrated with procurement workflows.
 - Finance Management System (Pallet Books)** — Designed a scalable finance platform (inspired by **Zoho Books / Tally**) supporting bank accounts, payable ledgers, purchase accounting, and real-time **reconciliation**. Integrated **Elasticsearch** for fast ledger search and audit log querying across large transaction volumes. Automated loan, credit card, and liability workflows. Migrated bank statement extraction to **Doc-AI**, achieving **95%** accuracy across multiple bank formats.
 - Architected **microservices** (Java 17, Spring Boot) with high-throughput REST APIs and **API Gateway** routing; optimized **PostgreSQL** schemas; implemented fault-tolerant async workflows using **Pub/Sub**, retries, and idempotent APIs. Set up **CI/CD pipelines** (GitHub Actions, Jenkins), **Docker** containerization, **Linux** server environments, and **Elasticsearch**-powered search/logging on **GCP**. Acted as technical owner across product, finance, ops, and HR teams; mentored junior engineers via code reviews and pair programming.
- Masai School** Remote
Full Stack Web Developer Jul 2022 – Jul 2023
 - Completed 2160+ hours of intensive full-stack and backend engineering training. Developed 3+ production-style applications including **Naukri** and **e-commerce** clones; built a backend-driven **Automated Auction Management System** with real-time bidding workflows. Strengthened core **DSA and system design** skills applied directly in subsequent engineering roles. Stack: Java, Spring Boot, Hibernate, MySQL, JavaScript.
- EFI Pvt. Ltd.** Bangalore, India
Associate Software Engineer Oct 2020 – Mar 2021
 - Delivered 3+ feature modules for the **Fiery** product (C++, SQL), contributing to two stable production releases. Partnered with QA and business stakeholders for requirements gathering, defect resolution, and release validation — building a foundation in enterprise software delivery that informed subsequent backend engineering work in Java and Spring Boot.

EDUCATION

Sri Venkateshwara College of Engineering, Chennai, Tamil Nadu Jul 2014 – May 2018
B.E. in Electronics & Communication Engineering

TECHNICAL SKILLS

Backend, Cloud & DevOps: Java 17, Spring Boot, Spring Security, Spring Cloud, REST APIs, Microservices, Hibernate/JPA, Event-Driven Architecture, API Gateway, GCP, Docker, CI/CD (GitHub Actions, Jenkins), Maven, Gradle, Linux, OpenAPI/Swagger
Databases, Search & Messaging: PostgreSQL, MySQL, MongoDB, BigQuery, Elasticsearch, Redis (Caching & Pub/Sub), GCP Pub/Sub, Async Processing, SQL Optimization
AI, Security & Languages: AI/LLM API Integration, Doc-AI, Generative AI, Prompt Engineering, JWT, OAuth 2.0, API Security, Python, JavaScript, Node.js, Flask, C++, Postman
Domain & Engineering Practices: Accounting Workflows, Reconciliation Engines, Ledger Systems, Payroll, LOP Calculation, Attendance & Shift Management, Facial Recognition, Geo-fencing, E-Invoicing, Inter-company Workflows, System Design, Distributed Systems, DSA, Agile/Scrum, Code Review

ACHIEVEMENTS & CERTIFICATIONS

- Employee of the Quarter — Twinleaves**
Recognized for high-impact engineering contributions and technical ownership across ERP, HRMS, and Finance platforms
- Prompt Engineering for Developers (Java) — DeepLearning.AI / ChatGPT
- Python Programming Certification — Apponix Training Center