

Sakthivel Madhu

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PROFESSIONAL SUMMARY

Backend Engineer specializing in building **large-scale, automation-first platforms** for procurement and finance domains, with deep expertise in **distributed systems, workflow orchestration, and high-throughput APIs**. Proven at delivering **reliable, fault-tolerant, and performance-critical systems** with a strong focus on correctness, scalability, and clean architecture.

PROFESSIONAL EXPERIENCE

• Twinleaves Retail Ecommerce India Pvt. Ltd.

Bangalore, India

• Software Development Engineer

May 2024 – Present

- Led end-to-end development of enterprise ERP modules across **Purchase, Vendor, and Finance**, owning the full lifecycle from system design to production rollout while delivering scalable, maintainable platforms.
- Architected and scaled microservices using **Java** and **Spring Boot**, building high-throughput **REST APIs**, optimizing relational schemas, and implementing fault-tolerant workflows with async processing, retries, and idempotent APIs to ensure correctness of financial operations.
- Designed an Express Purchase workflow combining PO, GRN, & put-away, reducing inventory onboarding time by **80%**; integrated **Doc-AI** invoice parsing, cutting manual data entry by **92%**, & improving GRN accuracy at scale.
- Acted as a technical owner for critical modules, collaborating with product, finance, & operations teams to translate complex workflows into robust systems, while mentoring juniors through code reviews & pair programming.

• Masai School

Remote

• Full Stack Web Developer

Jul 2022 – Jul 2023

- Built strong foundations in **DSA**, backend engineering, and full-stack development through an intensive full-time program. Developed production-style applications including **Naukri** and **E-commerce** clones, and designed a backend-driven **Automated Auction Management System** with real-time bidding workflows.

• EFI Pvt. Ltd.

Bangalore, India

• Associate Software Engineer

Oct 2020 – Mar 2021

- Contributed to the development of core modules for the **Fiery** product, working on feature design, implementation, and maintenance using **C++** and **SQL**. Collaborated with QA teams and business users to debug production issues, gather requirements, and deliver stable releases.

KEY PROJECTS

- **Purchase Order Management System (Enterprise ERP)** — Designed and built a full procurement lifecycle covering PR, PO, billing, payments, returns, replacement inwards, and **inter-company purchase workflows** with automated creation of PO, SO, and GRN. Implemented Express Purchase flows and real-time stock transfers to streamline inventory movement. Integrated **Doc-AI** for invoice extraction, reducing manual effort by **92%** and improving processing speed by **80%**. Implemented government-compliant **E-Invoicing** for Malaysian regulations, cutting manual invoice generation by **80%**.
- **Vendor Management System** — Built a centralized onboarding and compliance platform with automated GST, PAN, and bank verification via third-party integrations, significantly reducing manual validation and improving data accuracy. Designed configurable **Terms of Trade (TOT)** engines to support item-level rules, return policies, and location-based constraints, tightly integrated with procurement workflows.
- **Finance Management System (Pallet Books)** — Designed a scalable finance platform inspired by workflows in **Zoho Books** and **Tally**, supporting bank accounts, payable ledgers, purchase accounting, and real-time reconciliation. Automated loan, credit card, and liability workflows to improve audit readiness and financial accuracy. Migrated bank statement extraction from a rule-based parser to **Doc-AI**, increasing extraction accuracy to **95%** and improving reliability across multiple bank formats.

Education

Sri Venkateshwara College of Engineering, Chennai, Tamil Nadu

B.E.in Electronics & Communication Engineering — CGPA: 6.5 July 2014 – May 2018

Technical Skills

Backend & Cloud: Java, Spring Boot, Spring Security, REST APIs, Microservices, Hibernate, PostgreSQL, MySQL, BigQuery, GCP

Languages, Web & Tools: Java, Python, JavaScript, Node.js, Flask, HTML, CSS, Git, Docker, Maven, Gradle

Finance, Security & AI: Accounting Workflows, Reconciliation Engines, Ledger Systems, JWT, OAuth, Doc-AI, Generative AI, DSA

Achievements & Certifications

- Employee of the Quarter — **Twinleaves** (Recognized for high-impact contributions & ownership)
- Prompt Engineering (Python) — ChatGPT
- Python Certification — Apponix Training Center
- In-Plant Training — BHEL