

VIGNESH BABU O.R

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PROFESSIONAL SUMMARY

Senior Software Engineer with 13+ years of software engineering experience across backend platforms, payment systems, production engineering, and enterprise integrations. Hands-on experience building Python AI applications and agent workflows using FastAPI, LLM APIs, RAG, MCP, tool integration, workflow orchestration, and local SLMs with Ollama. Strong background in PHP/Laravel, REST APIs, MySQL, distributed production systems, observability, release engineering, and cross-functional delivery. Experienced in building and operating AI-enabled systems with API integrations, centralized logging, Grafana monitoring, and production troubleshooting.

TECHNICAL SKILLS

- Languages: Python, PHP, JavaScript, SQL
- AI & LLM: LLM Integration, AI Agents, RAG, MCP, Tool Calling, Function Calling, Prompt Engineering, Ollama, OpenAI APIs, Google AI/Gemini
- Backend: Python, FastAPI, PHP, Laravel, REST APIs, API Integration, Microservices, Distributed Systems
- Frontend: React, JavaScript; working exposure to TypeScript-based React development
- Automation & Orchestration: n8n, LangGraph, Workflow Orchestration, Event-Driven Automation
- Data: MySQL, Redis, Vector Search / Vector Databases
- Cloud & DevOps: AWS, Docker, Linux, Git, CI/CD, Release Pipelines
- Observability: Grafana, ELK Stack, Centralized Logging, Monitoring, Alerting, Production Troubleshooting
- Engineering: Unit Testing, Integration Testing, API Testing, Code Reviews, Reusable Components, RCA, Engineering Standards

PROFESSIONAL EXPERIENCE

Senior Software Engineer — Twid Rewards Global Payments Pvt Ltd | Oct 2021 – Present

- Design and enhance backend services for a payment and rewards platform across APIs, transaction workflows, merchant and issuer integrations, and production systems.
- Investigate complex distributed-system failures across payment gateways, issuer services, rewards flows, and downstream integrations; drive root-cause analysis and production fixes.
- Build internal automation and engineering tools to reduce repetitive operational work and improve configuration, troubleshooting, and production readiness.
- Collaborate with Engineering, Product, QA, TechOps, and external partners on technical requirements, releases, production incidents, and platform improvements.
- Own production troubleshooting and release validation, including monitoring, log analysis, incident coordination, and post-release verification.
- Develop AI/LLM-based engineering solutions to apply production knowledge to incident investigation, database interaction, and configuration planning.

Team Lead — Perisoft Technologies | Mar 2019 – Oct 2021

- Designed and developed e-commerce and enterprise applications using Magento, Laravel, PHP, REST APIs, and relational databases.
- Integrated Salesforce CRM and external systems through REST APIs and built reusable backend components.
- Led engineering delivery, code reviews, troubleshooting, and technical coordination across client projects.

Tech Lead — Fashalot Pvt Ltd | Feb 2017 – May 2018

- Built scalable REST APIs and backend services for web and mobile applications.
- Developed retailer voucher management and billing approval workflows and improved application performance and reliability.
- Coordinated with frontend engineers on API contracts and end-to-end application delivery.

Full Stack Developer — Tech R Labs | Jun 2014 – Feb 2017

- Developed full-stack enterprise web applications and REST APIs for mobile and web clients.
- Worked across backend, frontend, database, deployment, and CI/CD activities.

Web Developer — Netgrow Systems | Jan 2012 – Jun 2014

- Developed PHP/MVC applications, backend APIs, MySQL solutions, and Linux-based deployments.

Web Developer — Swis Info Services | Jun 2010 – Jan 2012

- Developed web applications, e-commerce solutions, backend APIs, and relational database components.

AI & AGENT ENGINEERING PROJECTS

AI Personal Assistant — n8n + Ollama + LLM

- Building an AI-powered personal productivity assistant using n8n and Ollama-hosted Small Language Models (SLMs) to manage emails, tasks, meetings, contacts, and personal workflows.
- Designing agent-driven workflows for natural-language intent detection, tool selection, context handling, multi-step orchestration, and API-based actions.
- Integrating Google Workspace and related services including Gmail, Google Tasks, Google Meet, Contacts, Google Maps, NotebookLM, and Gemini.
- Using n8n for workflow orchestration, API integration, event-driven automation, and tool execution; using Ollama for local SLM inference.
- Implementing ELK-based centralized logging and Grafana dashboards for workflow execution, API interactions, errors, latency, agent activity, system health, and operational visibility.
- Designing confirmation and approval flows for actions that modify or send user data.

Configuration Intelligence Agent (Internal application)

- Designing an AI agent that converts business requirements into context-aware production configuration plans and actionable checklists.
- Uses requirement analysis, follow-up questions, tool/workflow orchestration, validation rules, and knowledge retrieval to identify required configurations and missing dependencies.
- Designed around enterprise configuration workflows where correctness, traceability, and human approval are important.

HolmesGPT — LLM Incident Investigation Assistant (internal application)

- Built an LLM-powered incident investigation assistant using Retrieval-Augmented Generation over historical incident logs and engineering runbooks.
- Designed retrieval and reasoning flows to help on-call engineers investigate failures, correlate evidence, and identify probable root causes.

AI Health Tracker & Pedometer — Android

- Built an Android health-tracking application with Google AI capabilities for activity insights and personalized wellness assistance.
- Implemented activity tracking, progress views, local data handling, and AI-assisted user interactions.

ENGINEERING & PLATFORM

- Production Reliability: Incident response, RCA, log analysis, Grafana dashboards, ELK logging, monitoring, alerting, performance troubleshooting, release validation.
- AI Engineering: Agent workflows, tool integration, context handling, API integration, RAG, LLM integration, workflow orchestration.
- Development Practices: API design, reusable components, code reviews, testing-oriented development, documentation, and engineering standards.
- Delivery: CI/CD, release coordination, cross-functional execution, technical troubleshooting, and production support.

EDUCATION

M.Sc. Computer Science & IT — Sourashtra College, Madurai

B.Sc. Electronics & Communication — Sourashtra College, Madurai