MADHANA GOPAL P

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SUMMARY

Senior Software & AI Engineer with 5 years and 10 months of experience shipping scalable full-stack applications, Python and Node backend systems , and production AI workflows using LangChain and LangGraph. Curious by nature about how complex systems tick, I focus on curating quality product features, optimizing cloud usage costs, and dissecting complex third-party APIs to ship reliable integrations. By pairing close peer collaboration with reliable technical ownership, I have been recognized for streamlining agent-driven SDLC workflows and driving key initiatives from early architecture to containerized deployment.

EDUCATION

- **Bachelor of Science (B.Sc.) in Computer Science** – CGPA: **7.8** (2017 – 2020)
- **Higher Secondary Certificate (Class XII)** – Percentage: **95.3%** (2017)

WORK EXPERIENCE

Yavar AI **(May 2026 – Present)**
Senior Software Engineer Coimbatore, India (On-site)
Expense Reimbursement Engine & AI-Driven ATS Platform (Python, Graph Workflows, AI Agents, Docker, Kubernetes, Tally API)

- Collaborated with a cross-functional team to build a dynamic graph-based workflow policy engine in Python and deploy an AI-based expense reimbursement platform featuring asynchronous bill extraction, Tally accounting integration with automated connection-failure retry handling deployed in containerized services on **Docker** and multi-tenant **Kubernetes (K8s)** workloads.
- Expense Reimbursement Engine: Designed idempotent processing and retry mechanisms for asynchronous bill extraction and Tally API integrations, preventing duplicate accounting operations during connection failures.
- Accelerated engineering velocity and code quality by adopting agent-driven SDLC workflows using **Claude Code** with structured agent skills.
- AI-Driven ATS: Addressed concurrent interview orchestration by coordinating independent candidate evaluation workflows, interview state transitions, and **asynchronous AI agent execution**.

Adhash Techno Labs **(Sep 2025 – Mar 2026)**
Senior Software Engineer Coimbatore, India
AI-Integrated CRM, Humee AI Platform & Inventory Sync (Node.js, NestJS, MongoDB, Azure, React, Angular, RxJS, Razorpay)

- Collaborated across engineering and product teams to build and containerize (**Docker**) an AI-integrated CRM **(Zapcrm.ai)** platform automating multi-channel voice, messaging, and email pipelines, reducing customer response latency. Implemented **background processing** and reliable event handling for AI agent communication workflows, separating time-consuming operations from synchronous API requests.
- Contributed to the **Humee.com** live AI agent communication platform by integrating third-party AI APIs, building background workers and assisting with pricing plan database schema design and payment invoice delivery workflows.
- Enhanced features in a modular, high-performance Angular and RxJS dashboard for **Autochecker.com** for retail inventory synchronization (integrating eBay third-party APIs) and local invoice management, leveraging **Augment Code (a coding agent)** to streamline context-aware feature development and code refactoring across large codebases.

Neuronest AI Pvt Ltd **(Sep 2024 – Sep 2025)**
Full Stack Developer Coimbatore, India
High-Throughput AI WhatsApp Bot & Analytics Platforms (Python, Node.js, ReactJS, Docker, AWS, MongoDB, MySQL, Meta Business WhatsApp API, Razorpay)

- Defined foundational scaffold architectures utilizing coding agents like **Codex** across all of the startup's core applications and led development of Meta WhatsApp API and AI bot integration.
- Engineered Python asynchronous workers and rate-limited message queues to scale broadcast delivery throughput from 50K to 1M messages per minute per WhatsApp business phone number while lowering chatbot latency and improving uptime.
- Implemented Razorpay payment gateway integrations across production applications alongside building an internal dashboard management for a construction firm **samridhi.com** featuring project analytics, client data management and real estate portfolio tracking.

Yotta Web Services **(Aug 2021 – Sep 2024)**
Full Stack Developer Coimbatore, India
Enterot ERP Suite & Web Platforms (ReactJS, Node.js, PostgreSQL, ReduxJS, AWS EC2, NGINX, Bash, Razorpay)

- Led a 5-member engineering team in developing, integrating, and deploying core modules of the **Enterot ERP** platform—including automated invoice generation, employee productivity logging, and hierarchical RBAC—across ReactJS, Node.js, and PostgreSQL.
- Built a zero-dependency custom **Bash** orchestration script to deploy, monitor, and self-heal multiple forked application instances across AWS EC2 and NGINX—delivering Docker Swarm-like multi-instance resilience and zero-downtime rollouts without container orchestration overhead.
- Integrated Razorpay payment gateways across client applications, including the TestYourMetrics assessment platform, ensuring secure and reliable transaction processing.

Infosys **(Dec 2020 – Jul 2021)**
Operations Executive India

- Coordinated production operational workflows, SLA compliance, and cross-team incident resolution.
- Implemented database connectivity to MySQL using JDBC for staging applications.

PROJECTS

Open-Source Projects

Self-Hostable Multilingual ATS & Job Board - [In Progress] github.com/madhan-g-p/Job-Board

- Architected a self-hostable multilingual ATS and RAG platform using **LangChain**, **LangGraph** and local open-source models to parse cross-lingual resumes with structured outputs and zero external API overhead to evaluate candidate resume impact and synthesize tailored interview questions.
- Implemented strict **context window and token budget management** by pruning redundant resume sections and isolating per-candidate state graphs, preventing context overflow across multi-turn evaluations.
- Designed an event-driven microservice architecture backed by **RabbitMQ** for asynchronous resume ingestion, embedding generation, and decoupled inter-service communication.
- Exploring the integration of enterprise cloud AI platforms such as **Azure AI Foundry** and **Google Vertex AI** to extend the application with managed LLM services, cloud-based embeddings, and scalable AI capabilities.

DevDocs MCP Server github.com/madhan-g-p/DevDocs-MCP

- Built a Model Context Protocol (MCP) server that parses project package manifest files (`package.json`, `requirements.txt`) and local documentation to automatically resolve dependencies and index relevant framework docs per repository and installed package versions.
- Engineered targeted document chunking and relevance filtering to inject only high-signal documentation snippets into AI coding assistants, optimizing **context window utilization** and reducing token bloat and hallucination rates during code generation.

AI Course Creator github.com/madhan-g-p/AI-Course-Creator

- Built an AI-powered curriculum and course generation application using Python LLM pipelines to transform user-defined topics and difficulty targets into structured syllabi, learning modules, and detailed lesson plans.

Healthcare Backend System github.com/madhan-g-p/healtchare-backend

- Developed a modular healthcare backend API service handling patient workflows, appointment scheduling, and secure clinical data management.

Published NPM Packages (npmjs.com/~madhan-g-p)

- **@madhan-g-p/devdocs-mcp-server:** Local DevDocs Model Context Protocol (MCP) server delivering project-specific developer documentation context to AI agents and IDEs.
- **business-whatsapp-api:** Published TypeScript SDK for the Meta WhatsApp Cloud API featuring dual ESM and CommonJS module support for streamlined third-party messaging integrations.
- **sequelize-xtra-cli:** Next-generation command-line utility extending Sequelize ORM workflows for accelerated schema management and database migrations.

Key Industry Projects

- **Enterot ERP Suite (Yotta Web Services):** Led a 5-developer team to build modular ERP workflows across ReactJS, Node.js, and PostgreSQL (using Recursive CTEs for role hierarchies and automated invoice/productivity reporting), deployed across forked instances via resilient custom Bash orchestration scripts.
- **Diginest AI (Neuronest AI Pvt Ltd):** Architected the Python backend, async concurrency workers, and MongoDB schema supporting 1M messages/minute WhatsApp broadcast throughput and low-latency AI chat flows.
- **Samridhi Admin Dashboard & Auto Checker:** Built Angular/MySQL real estate asset/KYC management and Angular/RxJS eBay inventory-sync systems via third-party APIs.
- **Expense Reimbursement & Policy Engine:** Contributed to an AI-assisted expense claim platform featuring automated bill extraction and a dynamic graph-based workflow policy engine with real-time conditional policy validation.

SKILLS

• Core Languages:	Python, JavaScript, TypeScript, SQL, Bash
• AI & Agentic Frameworks:	LangChain, LangGraph, RAG Pipelines, Context Window Management, Chunking Strategies, Structured Outputs, Function Calling, MCP Servers, AI Voice Agents
• AI SDLC & Coding Agents:	Claude Code, OpenAI Codex, Google Antigravity, Augment Code, Custom Agent Skills & Plugins
• Cloud & AI Platforms:	Familiarity with Microsoft Azure AI Foundry, Azure OpenAI, Azure AI Search, Google Vertex AI, Gemini API, vector search.
• AI Agents & Retrieval:	Semantic Search, Local CPU Inference, Vector Search, Latency & Inference Optimization
• Backend & Architecture:	REST APIs, Microservices, RabbitMQ, Redis, NestJS, FastAPI, Pydantic, Sequelize ORM
• Frontend:	ReactJS, Angular, ReduxJS, Tailwind CSS, Accessible UI Engineering
• Cloud, DevOps & Tools:	Docker, Kubernetes (K8s - in progress), AWS (EC2, Instance), NGINX, PM2, Bash Script, CI/CD Pipelines
• Databases & Integrations:	PostgreSQL, MySQL, MongoDB, Meta WhatsApp Cloud API, Razorpay, Tally API, eBay API
• Leadership & Soft Skills:	Feature & Team Leadership, Cross-Functional Collaboration, Rapid API Documentation Analysis, System Design

CERTIFICATIONS

- **Learning Basic ABAP Programming** – (Issued May 2026) • SAP Learning Credential
- **MongoDB Schema Design Patterns and Anti-patterns Skill Badge** – (Issued Apr 2026) • Credly Certification
- **Accenture Nordics – Developer Job Simulation** – Forage (Issued Nov 2023) • Accenture Forage Certification
- **JavaScript Algorithms and Data Structures** – FreeCodeCamp (Issued Nov 2023) • JS DSA V7 Certification