PREMKUMAR A

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LinkedIn | GitHub | AlphaTales | Portfolio

SUMMARY

Founding Engineer and Full Stack Engineer with 2+ years of experience building AI-powered SaaS products across backend architecture, AI workflow orchestration, real-time systems, authentication, and production deployment. **Co-built AlphaTales from the ground up**, an AI-native project planning engine that turns raw ideas into validated plans, deep research, PRDs, architecture recommendations, tasks, and agent-ready Dev Packs. Experienced in shipping 50+ FastAPI endpoints, implementing 4+ LangGraph workflows with Azure OpenAI, and building event-driven AI execution using Dapr Pub/Sub, RabbitMQ, Socket.IO, WorkOS, Docker, GitHub, and Azure DevOps.

EDUCATION

BE, Computer Science Engineering, Hindusthan College of Engineering and Technology, Coimbatore 2020 - 2024
CGPA: 8.95 / 10

TECHNICAL SKILLS

Languages: Python 3.12, TypeScript, JavaScript, Dart
Backend: FastAPI, REST APIs, Pydantic v2, Beanie ODM, Microservices Architecture
AI & Workflow: LangGraph, LangChain, Azure OpenAI, Tool Calling, Structured Validation, Prompt Engineering
Frontend: Next.js 16, React, TypeScript, Tailwind CSS, shadcn/ui, Framer Motion
Database & Messaging: MongoDB, Beanie ODM, Dapr Pub/Sub, RabbitMQ, Socket.IO, JSON Workflow Contracts
DevOps & Security: Docker, GitHub Workflows, Azure DevOps, WorkOS, OIDC, OAuth, SSO
Mobile & CV: Flutter, Dart, OCR, Tesseract, Camera-first UX

PROFESSIONAL EXPERIENCE

Founding Engineer / Full Stack Engineer **Jul 2024 - Present**
AlphaTales, Brisbane, Australia (Remote)

- **Co-built AlphaTales from the ground up**, an AI-native project planning engine for teams and AI agents that converts raw ideas into validated plans, deep research, PRDs, architecture recommendations, tasks, and agent-ready Dev Packs.
- Designed and shipped 50+ REST API endpoints using Python 3.12, FastAPI, MongoDB, Beanie ODM, and Pydantic v2 with modular request/response contracts.
- Implemented 4+ production AI workflows for idea validation, discovery research, PRD generation, architecture planning, and task breakdown using LangGraph and Azure OpenAI.
- Built event-driven AI execution with Dapr Pub/Sub over RabbitMQ, defining message contracts for long-running AI jobs and non-blocking workflow execution.
- Delivered real-time AI progress tracking using Socket.IO so users could monitor multi-step AI jobs without page refresh or blocked request cycles.
- Implemented secure authentication and SSO with WorkOS, Email OTP, Google OAuth, Microsoft OAuth, and OIDC-aligned login flows.
- Contributed across the AlphaTales product suite including main app, marketing site, admin app, browser extension, and MCP server for AI-powered IDE context; commercial repositories are private.
- Managed Docker-based deployment support and CI/CD release workflows through GitHub and Azure DevOps.
- **Tech Stack:** Python, FastAPI, MongoDB, Beanie ODM, Pydantic v2, LangGraph, Azure OpenAI, Dapr, RabbitMQ, Socket.IO, WorkOS, Next.js 16, Docker

Software Developer Intern **Aug 2023 - Jan 2024**
Nitroware Technologies, Coimbatore

- Built AI chatbot workflows using LangGraph and LangChain with Human-in-the-Loop validation for safer response review.
- Automated project setup and onboarding tasks, reducing onboarding time by approximately 25% through repeatable workflow automation.
- Worked across Python workflow logic, prompt structure, and integration patterns for AI-assisted internal product flows.
- **Tech Stack:** Python, LangGraph, LangChain, Automation, Human-in-the-Loop Workflows

Python Developer Intern **Jan 2023 - Mar 2023**
LS Technologies, Coimbatore

- Developed FastAPI services backed by MongoDB with structured API design, validation, and reusable backend patterns.
- Implemented CRUD-style backend flows with database persistence, organized route logic, and clear request/response handling.
- **Tech Stack:** Python, FastAPI, MongoDB, REST APIs

PROJECT EXPERIENCE

AlphaTales: AI Project Planning SaaS

- Built an end-to-end AI planning workflow that moves from idea intake to AI validation, deep research, feature specs, PRD generation, architecture planning, task breakdown, and agent-ready Dev Pack export.
- Integrated long-running AI workflow execution with event messaging and real-time progress feedback for production SaaS usage.
- Supported Dev Pack and MCP-oriented context flows for AI-powered IDEs such as Cursor and Claude Code.
- Supported secure product access through WorkOS authentication, SSO-ready login flows, and deployment-oriented backend architecture.
- Commercial repositories are private due to product ownership; contribution is represented through product links and case-study evidence.
- **Tech Stack:** FastAPI, MongoDB, LangGraph, Azure OpenAI, Dapr, RabbitMQ, Socket.IO, WorkOS, Next.js 16, MCP

Refacta: AI-assisted code refactoring agent (GitHub)

- Designed a rules-driven multi-agent refactoring workflow that scans projects, interprets Markdown rule files, applies controlled refactor passes, checks compliance, and reports results.
- Added safety-oriented execution patterns including dry-run support, backups, compliance reports, build validation, and structured Markdown/JSON outputs.
- Published as a public repository under alpha-tales/refacta with a CLI/TUI-oriented developer workflow.
- **Tech Stack:** Python, Claude Agent SDK, Textual, Rich, Typer, PowerShell

InFit: AI nutrition tracker for India (GitHub)

- Built a public Flutter MVP foundation for a nutrition tracking app with photo-based calorie logging direction, macro dashboard screens, food confirmation flows, and profile/insights views.
- Structured the app with feature folders, reusable widgets, GoRouter navigation, Riverpod-ready state patterns, and bilingual Tamil/English voice assistant roadmap.
- Designed the app direction around Indian food habits, fast mobile logging, and Tamil/English accessibility.
- **Tech Stack:** Flutter, Dart, Riverpod, GoRouter, Camera, TTS/STT, Hive

clawd: Prompt-first multi-agent lead intelligence pipeline (GitHub)

- Created a prompt-first agent workflow for lead discovery, content signal collection, JSON audit storage, qualification, and guarded HubSpot handoff.
- Separated agents by responsibility so collection, evidence storage, processing, and CRM sync remain auditable and easier to maintain.
- Documented clear prompt contracts and no-automatic-outreach guardrails to keep lead processing controlled.
- **Tech Stack:** Prompt Engineering, Multi-Agent Design, JSON, HubSpot, LinkedIn Research

Focus: UG final-year OCR accessibility project

- Completed an undergraduate final-year computer vision prototype that converts visual text into audio output for visually impaired users.
- Implemented an OCR-to-audio flow covering image capture, preprocessing, Tesseract OCR, text cleanup, and audio playback.
- **Tech Stack:** Python, OCR, Tesseract

CERTIFICATIONS

- AWS Cloud Practitioner Certified
- Generative AI for Everyone - DeepLearning.AI
- NPTEL Internet of Things - IIT Madras
- Infosys Springboard course certificates