Purushoth DL

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EDUCATION

- **Sri Venkateswara University College of Engineering** — Tirupati, India
  Bachelor of Engineering in Electronics and Communication (First Class with Distinction) — *Aug 2021 - May 2025*

TECHNICAL EXPERIENCE

- **Dotnitron Technologies** — Remote
  AI Engineer Intern — *Mar 2025 - Apr 2025*
  - **Query Safety Library:** Designed and implemented a Python library for classifying and sanitizing user queries in production RAG systems, ensuring secure AI interactions.
  - **AI Agent Development:** Built autonomous financial research agents using LangChain and agentic frameworks to automate due diligence processes for business applications.
  - **Backend Task Management:** Implemented asynchronous background tasks using Celery and cron jobs to automate data lifecycle management and cleanup operations.

- **AIOverflow** — Remote
  Backend Developer Intern — *Aug 2024 - Dec 2024*
  - **Full-Stack Development:** Built and deployed "Level Up" gym management application from concept to production using FastAPI backend and Flutter frontend.
  - **API Design & Security:** Architected RESTful APIs with JWT authentication, implemented secure user management, and designed MongoDB data models for scalability.
  - **Cloud Deployment:** Containerized application with Docker and deployed to AWS (ECS/ECR), implementing CI/CD pipelines for production-ready deployments.

PROJECTS

Singularity Labs Agent — Code | Demo | Link
Tools: LangGraph, FastAPI, React.js, Google Calendar API, Docker, MongoDB
- Engineered a stateful AI agent to book Google Calendar appointments via natural conversation.
- Implemented a robust concurrency model to prevent race conditions and double-bookings.
- Built a scalable, decoupled backend with features for timezone handling and secure authentication.

Level Up Fitness — Code | Demo
Tools: FastAPI, Flutter, MongoDB, JWT Authentication, Firebase, Docker
- Delivered a full-stack mobile app for a local gym, actively serving 100+ clients.
- Empowered admins to manage custom diet/exercise plans and clients to track progress.
- Implemented secure JWT authentication and integrated Firebase for cloud media storage.

NextGenHealth — Code | Demo
Tools: FastAPI, Flutter, Gemini AI, Firebase Cloud Messaging, Docker
- Prototyped an AI platform to reduce doctor workload by auto-summarizing patient tickets.
- Integrated Gemini AI to analyze patient history and provide doctors with actionable summaries.
- Built secure, role-based chat with real-time push notifications via Firebase Cloud Messaging.

TECHNICAL SKILLS

Languages & Frameworks: Python, FastAPI, TypeScript, Golang
Backend & APIs: REST APIs, WebSockets, Real-time Applications, Microservices
AI & Automation: LangChain, RAG Architecture, AI Agents, LLM Integration
Databases: PostgreSQL, MongoDB, Redis, Database Design & Optimization
Message Queues & Cloud: RabbitMQ, Azure Service Bus, Celery, AWS, Docker
Frontend: React, Basic UI Development