

Adithya S Nair

AI Engineer

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Kottayam, Kerala, India

PROFILE

AI Engineer with close to two years of production experience building and maintaining core components of a medical AI platform — spanning LLM pipeline design, RAG workflows, prompt engineering, model evaluation, and FastAPI backend services across multiple LLM providers. Proven ability to build internal tooling and optimize data workflows that directly cut costs and improve system performance at scale. Experience leading a 200+ member technical community, mentoring peers in AI/ML fundamentals, and managing large-scale events. Driven by a quiet ambition to build AI systems that truly deliver when it matters. Eager to contribute, learn from peers, and progressively grow into mentoring and leading engineering teams.

EXPERIENCE

Doctreen *AI Engineer* 06/2025 – Present | Montpellier, France (Remote)

- Develop and maintain AI features for a medical report generation platform, integrating LLMs (OpenAI, HuggingFace, Nebius, OVH) with prompt engineering and retrieval-augmented generation (RAG) to improve diagnostic accuracy and output quality.
- Design and optimise vision analysis pipelines for DICOM medical imaging across 10+ modalities, with model evaluation against radiologist ground-truth data.
- Build internal tooling and data processing workflows — including a token-efficient serialisation format.
- Implement CI/CD pipelines and model monitoring to ensure reliable deployments and catch performance regressions across pipeline stages.

Tech: Python, FastAPI, LLM APIs, RAG, Prompt Engineering, Docker, CI/CD, Model Evaluation, Git, Jira, Postman, Linting, Testing

Doctreen, *AI Research Intern* 01/2025 – 06/2025 | Montpellier, France (Remote)

- Contributed to the foundational development of an AI-assisted medical report system —
- Implemented security guardrails and input validation to harden the system against prompt injection and adversarial inputs.
- Developed a multi-model benchmarking system to evaluate LLM performance across all pipeline stages with parallel execution.

EDUCATION

B-Tech, Computer Science with Artificial Intelligence and Machine Learning, 09/2021 – 08/2025 | Amritapuri, Kollam, India
Amrita Vishwa Vidyapeetham | Cgpa- 8.48

SKILLS

Programming Languages: Python (Primary), JavaScript, Java

AI / ML: LLM Integration & Prompt Engineering, Claude Skills Dev, RAG, Embeddings, Transformers, Deep Learning, Multi-Agent Systems, Model Evaluation & Monitoring

Frameworks: PyTorch, TensorFlow, Scikit-learn, FastAPI, LangChain, CrewAI, Django, React, Next.js, Streamlit, Gradio, Pandas, NumPy

Infrastructure: Docker, Git, CI/CD, REST APIs, MongoDB, MariaDB, Postman, Hugging Face, Jira & Confluence

PROJECTS

LensAI *AI-Powered Screen Region Explainer* 02/2026 – Present

- Built an MVP browser extension that lets users highlight any screen region — code, diagrams, articles, UI — and get instant, context-aware explanations powered by LLM integration, solving the constant context-switching friction developers and researchers face daily.
- Designed the capture-to-explanation pipeline: selected regions are processed through an AI backend and returned as clear, structured breakdowns without ever leaving the current tab.
- Built with vanilla JavaScript and Browser Extension APIs, using Claude as the core LLM backbone and Claude Code for rapid, skill-based development.

Skills: JavaScript, Browser Extension APIs, LLM Integration, Claude Code and Claude Skill development.

Namude Yatra 02/2025 – 03/2025

- Built a multi-agent travel planner that takes a destination and generates full day-by-day itineraries — handling research, scheduling, and recommendations through coordinated LLM agents using LangChain.
- Added a Streamlit frontend with interactive map visualisations (Pydeck) and a chatbot for follow-up questions and real-time trip adjustments.

Skills: LLM-based Agents, LangChain, Streamlit, Pydeck, Geopy, Generative AI.

OptiHire 10/2024 – 11/2024

- Built a web app that generates tailored cover letters and emails based on job descriptions, analyses resumes for keyword gaps, and tracks applications in one place — helping job seekers personalise their outreach without doing it manually every time.
- Integrated multiple APIs for job data scraping, LLM-based text generation, and resume parsing, with a Streamlit frontend for real-time feedback and visual analytics.

Skills: Streamlit, Web Scraping, LLM, NLP, Multi-API integration, Prompt Engineering

Mitti Mitra, *AI Soil Health Diagnostics for Indian Farmers* 12/2025 – 03/2026

Built a mobile app using computer vision and multi-source data fusion to help farmers assess soil health and receive actionable crop recommendations. Designed the ML pipeline and integrated with a Flutter/Firebase frontend for field-ready deployment.

Skills: Python, Computer Vision, Flutter, Firebase, Multi-Source Data Fusion

Inventory Optimisation Using DQN.

04/2024 – 06/2024

- Modelled a single-retailer inventory control problem as a Markov Decision Process — the agent learns when to reorder and how much to order based on current stock levels, demand patterns, and cost constraints (holding, ordering, shortage).
- Trained a DQN agent on simulated demand data with variable weekly patterns and compared its learned policy against a classic (s,S) reorder policy, demonstrating lower total costs and fewer stockouts across test scenarios.

Skills: Reinforcement Learning, Deep Q-Network, Python, Supply Chain Fundamentals

SWC File Generation from MRI, Role - MRI Refining & Graph Generation

08/2023 – 02/2024

- Developed AI software for generating SWC files to analyse human brain vascular flow from MRIs, focusing on refining MRI data and creating detailed graph representations for enhanced medical insights.

MedReportGen AI, AI Engine & Architecture

08/2024 – 02/2025

- Developing an advanced medical report generation system integrating Microsoft's Radino VLM for robust feature extraction and a Large Language Model (LLM) for detailed analysis, transforming unstructured clinical data into precise, structured, and medically relevant reports.

LEADERSHIP & COMMUNITY

ACM Student Chapter, Amritapuri,

2022 – Present | Kollam, Kerala

Member → AI Club Mentor → Chairperson → Advisory Council

Led the chapter as Chairperson for 1.5 years — organised national-level hackathons, coding competitions, workshops, and the annual tech fest. Mentored students in the AI Club on ML fundamentals and project development. Now serve on the Advisory Council, providing strategic guidance.

Vidyut Multi-Fest, Core Committee '24, Executive Member '23

2023 – 2024

Managed participant accommodations and logistics for one of Kerala's largest student-run multi-fests

ICPC Asia West Regional Finals, Overall Coordinator

2022 – 2023

Coordinated event logistics, participant management, and on-ground operations for the ICPC regional finals hosted at campus.

Decoding AI, Student Social Responsibility (SSR) Project

Conducted an introductory AI awareness program at Sreyas Public School, Kottayam — addressing the AI knowledge gap and fostering equitable access to technology education among school students.

CERTIFICATES

- Computer Vision [↗](#)
- Cybersecurity Essentials Badge [↗](#)
- Data Visualisation: Empowering Business with Effective Insights [↗](#)
- bit.ly/certificate-repo [↗](#)
- DL for Images, Text with PyTorch

LANGUAGES

English: (Professional proficiency)

Malayalam: (Native proficiency)

Hindi: (Working proficiency)