

MUHAMMED HAMMAD S

AI/ML Engineer | Generative AI Developer | Full-Stack AI Applications

📍 Pernambuco, Tamil Nadu

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PROFESSIONAL SUMMARY

AI/ML Engineer and Generative AI enthusiast with hands-on experience building AI-powered web applications, intelligent automation tools, and document intelligence systems. Proficient in developing full-stack applications using Python, Next.js, TypeScript, FastAPI, and modern AI technologies including RAG pipelines, LangChain, and Generative AI. Currently developing Aetherion AI, an autonomous intelligence platform, while pursuing B.Tech in Computer Science & Business Systems. Passionate about building scalable, production-ready intelligent systems that solve real-world problems.

TECHNICAL SKILLS

Programming Languages: Python, TypeScript, JavaScript, Java (Basic), HTML, CSS, PHP, SQL (MySQL)

AI / ML: Machine Learning, Supervised & Unsupervised Learning, Deep Learning (Basic), Generative AI, Prompt Engineering, Retrieval-Augmented Generation (RAG), LangChain, Feature Engineering

Data Science: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, TensorFlow, Keras, EDA, Data Visualization, Statistics, Semantic Search

Web & Backend: React.js, Next.js, FastAPI, REST APIs, Tailwind CSS, Streamlit, PHP

AI Libraries & Tools: LangChain, FAISS, ChromaDB, Whisper, tiktoken, OpenAI API, LLM Integration

Tools & Platforms: Git, GitHub, Docker, Netlify, Power BI, Excel, Oracle Cloud Infrastructure (OCI), AWS Elastic Beanstalk, AWS Fundamentals

FEATURED PROJECTS

Aetherion AI • *Ongoing* | Python, Next.js, TypeScript, FastAPI, LangChain, OpenAI API

- Autonomous AI platform focused on intelligent workflows, advanced reasoning systems, and next-generation AI experiences.
- Designing modular AI agent architecture with self-directed task execution and multi-step reasoning capabilities.

Smart Doc AI ✓ *Deployed* | Python, FastAPI, LangChain, FAISS, OpenAI API, Next.js

- AI-powered document intelligence platform for extracting, analyzing, and exporting structured data from PDFs and images.
- Integrated multiple AI providers with intelligent fallback mechanisms for high availability and accuracy.

AI Proposal Writer ✓ *Deployed* | Python, Next.js, TypeScript, FastAPI, LangChain, PDF Export

- Proposal generation platform enabling freelancers and agencies to create professional proposals using AI-assisted content generation.
- Features include editing, PDF export, draft management, and reusable template system.

Advanced Video QA System ✓ *Deployed* | Python, Streamlit, FAISS, ChromaDB, LangChain, Whisper, tiktoken

- End-to-end RAG pipeline: transcript extraction via Whisper, text chunking, embedding generation, and FAISS/ChromaDB vector search.
- Integrated LangChain with OpenAI/Local LLM for context-aware answers with timestamp-based video navigation.
- Reduced hallucination through semantic retrieval; built Streamlit UI for natural language queries over video content.

Nexus AI Ops ✓ *Deployed* | Next.js, TypeScript, FastAPI, Python, Recharts, LangChain

- AI-native operational intelligence platform with business analytics dashboards, AI copilots, and telemetry monitoring.

Shopper Spectrum — Customer Segmentation Engine ✓ *Deployed* | Python, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn

- Performed customer segmentation using K-Means and hierarchical clustering on transactional data.
- Built product recommendation logic based on purchase history; derived actionable business insights via EDA and feature engineering.

Image Toolkit Pro ✓ *Deployed* | Python, PyInstaller, Tkinter/PIL

- Desktop application for image processing and productivity workflows; distributed as standalone Windows executable.

INTERNSHIP EXPERIENCE

AI/ML Intern | LabMentix Pvt. Ltd.

Jul 2025 – Jan 2026 (6 Months)

- Built end-to-end ML pipelines covering data preprocessing, EDA, model training, hyperparameter tuning, and evaluation.
- Implemented supervised and unsupervised algorithms (classification, regression, clustering) on real-world datasets using Scikit-learn.

Data Science Intern | Saiket Systems

Sep 2025 – Oct 2025

- Performed data analysis and visualization on real-world datasets to derive statistical insights for BI reporting.

Python Intern | Navodita Infotech

Sep 2025

- Developed Python programs leveraging OOP principles, scripting, and automation; built reusable utility modules.

Web Development Intern | CodeBind Technologies

Jul 2025

- Built responsive web pages using HTML, CSS, and JavaScript; assisted in backend development with PHP and MySQL.

EDUCATION

B.Tech – Computer Science & Business Systems (CSBS)

Expected: June 2027

Kingston Engineering College, Katpadi, Tamil Nadu | 4th Year – Semester 1 | CGPA: 6.0+

CERTIFICATIONS (16 INDUSTRY-RECOGNIZED)

- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate
- Oracle Cloud Infrastructure 2025 Certified Foundations Associate
- AWS x Deloitte Australia – Solutions Architecture Job Simulation
- Tata Group – GenAI Powered Data Analytics Job Simulation
- Deloitte Australia – Data Analytics Job Simulation
- Reliance Foundation – Data Science for Everyone
- Reliance Foundation – Python for Data Science
- AI/ML Internship Certificate – LabMentix Pvt. Ltd.
- + 8 additional certifications from NISM, Coursera, and other organizations

ADDITIONAL INFORMATION

Languages: English, Tamil, Urdu, Hindi

Interests: Autonomous AI Systems, AI Agents, LLM Research, Full-Stack AI Product Development