

M. IHTHISHAM IRSHAD

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PROFILE

AI & Data Science undergraduate and hands-on AI/ML developer specializing in Agentic AI, Generative AI, and intelligent data systems. Experienced in designing LLM-powered applications, RAG pipelines, autonomous workflows, and scalable Python/FastAPI architectures. Strong foundation in LangGraph, vector databases, multimodal AI, data engineering, and end-to-end AI application development.

CORE TECHNICAL SKILLS

- **Programming & Data:** Python, R, Java, SQL, Pandas, NumPy, TypeScript
- **Machine Learning & AI:** Scikit-learn, TensorFlow, PyTorch (CUDA, Apple MPS), Predictive Modeling
- **LLMs & GenAI:** RAG (Citation-Aware, Multimodal), LangChain, Agentic Workflows (LangGraph), E2B Sandboxing, Ollama, Llama 3.2, OpenAI & Hugging Face APIs, Semantic Search
- **MLOps & Deployment:** Docker, FastAPI, GitHub CI/CD, Model Versioning
- **Cloud & Platforms:** AWS, Microsoft Azure, Google Colab, Jupyter
- **Databases & Search:** FAISS, Pinecone, ChromaDB, MySQL, MongoDB
- **Computer Vision:** OpenAI CLIP, OpenCV, OCR (Tesseract), Image & Video Processing
- **Frameworks & Tools:** Next.js 14, Tailwind CSS, Streamlit, React(MERN), Framer Motion, REST APIs
- **Visualization & BI:** Power BI, Tableau, Looker Studio, Excel, Matplotlib, Plotly

EDUCATION

BSc in Information Technology Specializing in Data Science - **SLIIT** | 2023 – Present
AI Engineer Bootcamp - **StemLink Sri Lanka** - Completed | Jan 2026 – [View Certificate](#)

AI/ML PROJECTS

Lak-Arthika | Sri Lankan Economic & Commodity Intelligence Platform - [Preview](#)

Data Engineering & Applied ML | Python, FastAPI, Pandas, GeoJSON, Plotly, PostgreSQL/PostGIS

- Architected a modular economic intelligence platform integrating Sri Lankan commodity market data, with automated ingestion, preprocessing, validation, analytical workflows.
- Developed a FastAPI-based data processing architecture supporting structured market intelligence, geospatial analysis, and interactive commodity trend visualization.
- Designed a scalable geospatial architecture with GeoJSON-based data services and a migration pathway toward PostGIS and MapLibre GL for production deployment.

2. Vitalis: Sovereign Edge AI Medical Operating System - [Preview](#)

Full-Stack AI Engineering | Python, FastAPI, Next.js, Ollama (Llama 3.2/LLaVA), ChromaDB

- Developed a privacy-first medical AI platform enabling fully offline multimodal LLM inference on Apple Silicon. Along, built **“Surgical Mode” Voice OS**, a state-aware, hands-free navigation agent for sterile clinical environments using custom intent classification.
- Built multimodal RAG pipelines integrating medical images, voice interactions, and agentic clinical workflows.
- Designed secure offline patient data transfer using AES-256 encryption and steganography.

3. ‘Spectra’ | Autonomous AI Data Scientist & Agentic Platform - [Preview](#)

Agentic AI, Full-Stack Engineering | Python (FastAPI), Next.js 14, LangGraph, E2B Sandbox, Plotly

- Built an autonomous AI analyst capable of planning analyses, generating Python code, and executing workflows using LangGraph.
- Developed automatic dataset profiling & interactive dashboard generation from natural language queries. And Integrated web intelligence for context-aware analytical reasoning.

PROFESSIONAL EXPERIENCE

Full-Stack Engineer & Data Analyst | ProTron Technologies | 2024 - 2025

- Built ML-assisted web applications using **Python, MERN, PHP, MySQL, MongoDB, REACT**
- Designed **predictive models & analytics dashboards** using Scikit-learn, Power BI, Excel.
- Analyzed business workflows and implemented automated data processing and reporting solutions.

Freelance Machine Learning Engineer | Nov 2025 – Present

- Developed **Insight**, AI-Powered machine learning notes & knowledge management platform.
- Building **ARA**, a native macOS assistant with local LLM and Cloud based LLM integration and intelligent automation. This understands the Mac and becomes a living OS.
- Designing AI solutions involving agentic workflows, RAG systems, and FastAPI backends.
- Developed Sticky, lightweight native MacOS scratchpad app featuring persistent notes. [Visit](#)
- Engineered an offline multimodal video search engine using CLIP, PyTorch, and FAISS for semantic video retrieval.
- Architected a Sri Lankan commodity intelligence platform integrating data pipelines, geospatial analytics, and market insights.

REFEREES

Imadh Ifham

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