# MOHAMMED ADIL SIRAJU

## AI ENGINEER | GENAI, MLOPS & INTELLIGENT AUTOMATION

+971-52-112-7270 | mohdadilsiraju@gmail.com | Dubai, UAE | linkedin.com/in/adilsiraju

## PROFESSIONAL SUMMARY

High-impact Machine Learning Engineer with a First Class B.E. in AI & ML. Pioneers the design and architecting of deep learning, NLP, and computer vision systems that deliver measurable business solutions. Expert in the full MLOps lifecycle, demonstrating a strong aptitude for deployment, optimization, and scaling AI systems in dynamic environments. Thrives on cross-functional collaboration, driving impactful technical solutions with a commitment to continuous learning and cutting-edge project execution.

## CORE COMPETENCIES

**Generative AI & Deep Learning:** LLMs (Gemini, OpenAI, Anthropic APIs) • Prompt Engineering • Retrieval-Augmented Generation (RAG) • BERT • Bio_ClinicalBERT • Transformer Architectures • CNNs • YOLOv11s • ResNet • Transfer Learning • Attention Mechanisms • Hyperparameter Optimization

**Technical Stack:** Python • SQL • PyTorch • FastAI • Hugging Face Transformers • Scikit-learn • Pandas • NumPy • Matplotlib • OpenCV • Docker • CI/CD (GitHub Actions) • Kubernetes (familiar) • Linux (Ubuntu) • GitHub • REST APIs • FastAPI • Streamlit • Gradio • Supabase

**Machine Learning & Data Engineering:** Supervised & Unsupervised Learning • Feature Engineering • Data Cleaning & Augmentation (SMOTE, Image/Video Transforms) • Cross-Validation • Model Evaluation (ROC-AUC, F1-Score, Confusion Matrix) • Ensemble & Stacking Methods • Model Monitoring & Versioning

**MLOps & Deployment:** End-to-End ML Pipelines • Real-Time Inference APIs • Automated Deployment (Docker, CI/CD) • Infrastructure-as-Code • Cloud Readiness (AWS/GCP/Azure) • Model Tracking • Performance Monitoring • Scalable API Design

**Intelligent Automation & Orchestration:** n8n (Workflow Automation) • Supabase (Vector DB) • Low-Code Agentic Workflows • Business Process Automation • Email & Report Scheduling • Integration with Gmail, Google Sheets, Notion

**Analytical & Collaborative Skills:** Problem Solving • Critical Thinking • Research & Experimentation • Rapid Prototyping • Team Collaboration • Technical Communication • Continuous Learning & Innovation

## WORK EXPERIENCE

**Freelance ML Consultant**| Lotus Wedding Hall                                      Feb 2025 - Present
- Developed demand forecasting models using Python and scikit-learn to optimize venue scheduling and inform dynamic pricing strategies
- Built interactive Streamlit dashboards for real-time tracking of bookings, customer engagement, and revenue metrics.
- Designed automated data pipeline generating weekly performance reports and booking trend analysis.

**AI Devops Engineer**| Rooman Technologies                                          Sep 2024 - Feb 2025
- Designed CI/CD pipelines using GitHub Actions and Docker, automating ML model testing and deployment in development environments.
- Containerized multiple ML applications with multi-stage Docker builds and orchestrated deployments using Kubernetes.
- Collaborated with engineering teams to architect scalable ML workflows and optimize deployment strategies for production readiness.
- Developed hands-on proficiency in MLOps best practices including model versioning, monitoring, and infrastructure-as-code.

## PROJECTS

**Medical Document Classifier** | *Hugging Face Transformers, Gradio, Python* | *Visits: 174+* | [Demo](#)

- Fine-tuned Bio_ClinicalBERT model, achieving 81% test accuracy and an F1-score of 0.968 for cardiovascular classification.
- Engineered a specialized data preprocessing pipeline, improving minority class recall by 23% using SMOTE and stratified sampling.
- Implemented end-to-end ML workflow, including hyperparameter tuning and k-fold cross-validation.
- Deployed a real-time inference API using Gradio, delivering sub-200ms response time on Hugging Face Spaces.

**Architectural Style Classifier** | *FastAI, PyTorch, Gradio* | *Visits: 261+* | [Demo](#)

- Developed a CNN-based multi-class classifier achieving 73% accuracy using ResNet-34 transfer learning (12% improvement over baseline).
- Curated and Preprocessed custom dataset of 10,000+ images, expanding effective training data by 40% with advanced augmentation.
- Optimized model performance through learning rate finder, progressive resizing, and mixed-precision training.
- Deployed via Gradio API and GitHub Pages, serving 500+ real-time inference requests.

**EcoVest - Sustainable Investment Platform** | *Django, Scikit-learn, Python, PostgreSQL*

- Developed Random Forest models to forecast environmental impact with $R^2 > 0.85$.
- Constructed end-to-end ML pipelines for feature engineering, scaling, and cross-validated hyperparameter tuning across 30+ sustainability datasets.
- Implemented full-stack Django app with REST API and PostgreSQL for real-time impact analytics.

**YOLO Coins Counter** | *YOLO11s, PyTorch, Gradio, Hugging Face Spaces* | [Demo](#)

- Built a custom YOLO11s model in under 24 hours to detect 1 Dirham, 50 Fils, and 25 Fils coins in real time.
- Trained on 118 manually captured images, achieving Precision: 0.89, Recall: 0.99, mAP50: 0.995.
- Deployed via Gradio + Hugging Face Spaces, providing instant calculation of total AED from images or camera feed.
- Gained end-to-end experience in dataset creation, annotation, model training, evaluation, and deployment.

**RAG AI Agent** | *n8n + Supabase + Gemni APIs*

- Designed and deployed a Retrieval-Augmented Generation (RAG) AI agent capable of answering queries from custom documents using Gemni APIs.
- Built the entire workflow in n8n (no-code) with Supabase as a vector database for embedding-based retrieval.
- Integrated data ingestion, context retrieval, and intelligent response generation into a single automated pipeline.
- Explored backend logic and memory mechanisms to enhance reliability and performance.
- Strengthened understanding of agentic workflows, low-code orchestration, and vector database operations for scalable AI applications.

## EDUCATION

**Bachelors in Engineering** | Artificial Intelligence and Machine Learning                    Dec 2021 – June 2025
Visvesvaraya Technological University | CGPA: 7.33 (First Class with Distinction)                    Mangalore
Relevant Coursework: Artificial Intelligence, Deep Learning, Machine Learning, Computer Vision, Natural Language Processing, Data Structures & Algorithms, Cloud Computing, Database Management Systems.

## CERTIFICATIONS

- **OCI AI Foundations Associate** (Oracle, 2025)
- **Python for Data Science** (IBM, 2022)
- **CS50x** (Harvard, 2025)

## LANGUAGES

English (Fluent) | Arabic (Basic) | Hindi (Fluent)