

Ahmed Khaled Ali

Data Scientist | Machine Learning Engineer

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🐙 [GitHub](#)

🌐 [Portfolio](#)

❖ Professional Summary:

Self-taught ML engineer who transitioned from web development to AI/ML through intensive certification programs and hands-on project work. Built production systems as sole developer while completing engineering degree. Experienced in taking projects from concept to deployment with minimal supervision.

❖ Education:

Bachelor of Engineering | Obour High Institute for Engineering and Technology
Major: Computer and Control Engineering | Sep 2019 - July 2024

❖ Work experience:

Full-Stack ML Engineer | [SongLabAI](#) (Startup) | Sep 2024 - Present

- End-to-end ownership of music generation platform serving 50 users/generating 100+ songs
- Architected and deployed 2 custom generative AI models for vocal and instrumental synthesis
- Integrated Hugging Face inference APIs with custom WordPress frontend and PHP backend
- Implemented secure user authentication, payment processing, and MySQL database architecture
- Tech Stack:** Hugging Face, Python, WordPress, PHP, MySQL, REST APIs, AI/ML Model Development

Founding Engineer | [Connectyed](#) (Contract) | Apr 2024 - Sep 2024

- Built MVP for professional matchmaking platform in 5 months as sole technical founder
- Developed Laravel REST API backend and Vue.js SPA frontend with real-time features
- Created recommendation engine using collaborative filtering for match suggestions
- Integrated Zoom/Google Meet APIs and deployed on production infrastructure
- Tech Stack:** Vue.js, JavaScript, Laravel, PHP, MySQL, OAuth, RESTful APIs, AI/ML Model Development

Freelance Data Scientist & Developer | Self-Employed (Upwork) | Mar 2022 - Present

- Started as web developer (Python/PHP) while completing undergraduate studies
- Transitioned to ML/AI projects after intensive self-study and certifications
- Delivered 15+ projects including web applications, data analysis, and ML models
- Worked with international clients across diverse industries.

❖ Technical Skills:

- Programming & Frameworks:** Python (primary), SQL, PHP; TensorFlow, PyTorch, Keras, scikit-learn, Pandas, NumPy; FastAPI, Laravel, Vue.js.
- Machine Learning & Data Science:** NLP, Computer Vision, Time-series Forecasting; Model Training & Fine-tuning, Statistical Analysis; Generative AI (Hugging Face, LLMs).
- Production & Infrastructure:** Docker, Git, MySQL, ChromaDB; AWS, GCP (deployment & model serving); REST APIs, Database Design.
- Data Visualization & Tools:** Matplotlib, Plotly, Streamlit; A/B Testing, Data Preprocessing.

❖ Core Competencies:

- Data Analysis & Modeling: Skilled in data-driven decision-making and building predictive models for various industries, including insurance, agriculture, and real estate.
 - Machine Learning & AI: Extensive experience in developing, training, and deploying models for NLP, computer vision, and time-series forecasting.
 - Technical Communication: Adept at presenting complex data insights and model outcomes to both technical and non-technical stakeholders.
 - Project Management: Proficient in managing projects from conception to deployment, ensuring timely delivery and optimized outcomes.
 - Cross-Functional Collaboration: Effective in working with diverse teams to drive innovation and improve processes.
 - Problem Solving & Creative Thinking: Strong ability to tackle complex challenges with innovative solutions.
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❖ Courses & Certifications:

- Data Scientist Certificate | DataCamp | Sep 2024 (Expires Sep 2026) [Link](#).
 - Associate Data Scientist in Python career track | DataCamp | Apr 2024 [Link](#).
 - Machine Learning Engineer career track | DataCamp | Aug 2024 [Link](#).
 - Associate Python Developer career track | DataCamp | Aug 2024 [Link](#).
 - Data Scientist in Python career track | DataCamp | Aug 2024 [Link](#).
 - Python Data Fundamentals | DataCamp | Mar 2024 [Link](#).
 - Software Engineer Certificate | Hackerrank | Aug 2024 [Link](#).
 - Problem Solving (Intermediate) Certificate | Hackerrank | Aug 2024 [Link](#).
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❖ Projects:

- **Enterprise RAG System:**
 - Built production-ready document retrieval platform with FastAPI backend, Streamlit frontend, and ChromaDB vector database
 - Implemented JWT authentication, Redis caching, and Docker deployment for enterprise-grade security and performance
 - Achieved <100ms semantic search response times with hybrid search capabilities and real-time document processing
- **ML Training & Serving Pipeline:**
 - Developed complete MLOps pipeline from SimpleDLRM model training to production API serving with Azure ML integration
 - Implemented spot instance optimization achieving 60-90% cost savings while maintaining <50ms prediction latency
 - Built scalable training infrastructure handling 1M+ samples with automated model deployment and 1000+ RPS throughput
- **Analyzing Car Reviews with LLMs:**
 - Designed chatbot application using Large Language Models for auto dealership customer service
 - Implemented sentiment analysis, Q&A, and text summarization features
 - Reduced customer support response time by 40%
- **Modeling Car Insurance Claim Outcomes:**
 - Built predictive model optimizing pricing strategies for insurance company
 - Enhanced risk assessment accuracy, increasing profitability by 15%
- **Recipe Site Traffic Analysis & Prediction:**
 - Developed predictive models achieving 80.87% precision in identifying high-traffic recipes
 - Performed comprehensive data preprocessing and exploratory analysis
 - Delivered actionable insights improving site traffic by 20%

For more projects, visit my [GitHub Portfolio](#).

❖ Languages:

- Arabic: Native
- English: Advanced