# Ziad Amer

6th of October, Al Jizah, Egypt

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# Summary

- Experience:
- 8+ years of total coding experience with 4+ years in AI, now applying my skills professionally as an R&D ML Specialist at Mazaady, developing scalable AI systems and delivering research-backed solutions.
- Additionally specializing in **Business Process Automation** (n8n, MCP) to reduce operational costs by **up to 70%**, and actively leading initiatives in **Quantum Computing education**
- I am also Experienced in Neural Networks, Scikit-Learn, Pandas (Software), Artificial Neural Networks, NumPy, Applied Reinforcement Learning
- ML Ops (Docker, Deployment)
- REST API Design & Documentation
- Production-Ready Al Solutions

#### Skills:

Proficient in Python, TensorFlow, Keras, OpenCV, Deep Mathematical Machine Learning Algorithms. Experienced in breaking down complex technical concepts for learners and mentoring teams to master Al principles and real-world applications.

Workflow Automation: n8n, Model Context Protocol (MCP), Al Agents Quantum Computing: Qiskit, Quantum Mechanics Fundamentals ML/DevOps: PyTorch, Linux System Engineering, Kubernetes, Docker

- Career Highlights:
- Explained one of the hardest mathematics questions to peers (The Legend of Question Six), fostering a culture of curiosity and understanding.
- Successfully built Al-powered systems, including healthcare solutions, smart home automation, and predictive analytics tools.
- Mentored aspiring coders to bridge the gap between theory and hands-on Al implementation.
- Joined Mazaady as a part-time R&D Machine Learning Specialist, building production-grade ML solutions and delivering proactive value in a professional tech environment.
- Certified Machine Learning Specialist (Stanford University)
- Currently Learning:
- YOLO, Ultralytics, Transformers and Its Revolutions in Computer Vision, Deep Learning Specialization (Andrew NG) {Last Course}, Stable Diffusion, GloVe (Global Vector for Word Representation)

# **Experience**



#### Business Automation Specialist

Self-Directed / Remote

Nov 2025 - Present

- Architecting intelligent automation systems using n8n and Model Context Protocol (MCP)
- Designing "invisible workflows" that reduce operational costs by up to 70% and accelerate process

execution by 50-90%

Example Project: an Al-powered Technical troubleshooting system integrating human-in-the-loop approval via Telegram



#### Part-Time R&D Machine Learning Specialist

Mazaady - Remote

May 2025 - Present

- Developed and proposed weekly machine learning R&D ideas tailored to the company's product vision.
- Proactively built a full ML project including model fine-tuning, Dockerization, and performance optimization for production-readiness.
- Ensured lightweight, fast, and mobile-compatible deployment.
- Authored complete API documentation to streamline integration.
- Optimized model performance for mobile deployment, reducing inference time, while maintaining high accuracy.
- Worked independently while balancing university studies, demonstrating ownership and initiative.
- Showcased strong anticipation of product needs before formal requests, delivering value beyond the expected scope.

# Quantum Computing Educator & Founder

Quantum Computing Arabization Initiative

Oct 2025 - Present

- Founded and lead a 15-member team (editors, scriptwriters) to arabize IBM's Quantum curriculum
- Under Support of academic staff (Dr. El-Ramly CS Department FCAI) to democratize quantum education in the MENA region



## Machine Learning Specialist

GDG on Campus Modern Academy for Computer Science

Nov 2024 - Present (2 months)

As an Al Tutor at GDG, I help individuals navigate the complexities of Al and machine learning. I break down technical concepts into digestible pieces, ensuring that learners not only understand but also apply AI principles. My role is to mentor, guide, and provide hands-on learning experiences to foster growth in Al knowledge, preparing individuals for real-world challenges. By sharing practical insights and empowering others, I strive to create a community that thrives on collaboration and continuous learning.

Teaching is all about Communication and Leadership in order to march through the concepts of Al... Which I excel at.

#### **Machine Learning Architect**

Freelance

Nov 2024 - Present (2 months)

As a freelancer, I specialize in providing problem solving tailored to AI and machine learning solutions for clients across various industries. Whether it's developing predictive models, building intelligent

systems, or offering expert guidance, I focus on delivering results that address real-world challenges. I work closely with clients to understand their specific needs, then craft customized, scalable Al solutions that drive efficiency, optimize decision-making, and create business value.

## **Research & Publications**



## Bayesian Optimization and Progressive Fine-Tuning Pipeline for Kidney CT-Scan **Image Detection**

Under Review, Egyptian Informatics Journal

July - Nov 2025

- Developed a State-of-the-Art Deep Learning system achieving 99.92% accuracy, outperforming existing literature (YOLOv8, Swin Transformer)
- Innovation: Designed the CW3BO algorithm (Class Weight Balancing via Bayesian Optimization) to solve severe dataset imbalance
- Implementation: Built a progressive fine-tuning pipeline using DenseNet201 and Test-Time Augmentation (TTA)

#### **Education**



# Faculty of Computers and Artificial Intelligence - Cairo University

Bachelor's degree, Artificial Intelligence

Oct 2024 - Jul 2028

My university experience is about more than just gaining technical knowledge-it's about applying what I've learned in meaningful ways, collaborating with peers, receiving mentorship, and staying motivated to continuously improve. It's been a powerful foundation for everything I'm doing now and a launching pad for future success in AI and machine learning.

#### **Licenses & Certifications**



Machine Learning Specialization - Stanford University

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#### **Skills**

Machine Learning Models • Recommender Systems • Deep Neural Networks • Best ML Practices • Decision Trees • Linear/Logistic Regression • Python (Programming Language) • Simplifying Complex Concepts • Hands-On Mentorship • Communication & Patience

#### **Honors & Awards**

#### 4th Winning Project Nationally (Egypt) - Ministry of Education

Project MaLoM: Al Research Assistant Project

 Description: Designed and developed an Al-powered application leveraging Optical Character Recognition (OCR) to assist researchers in extracting, processing, and organizing textual information. The application features a streamlined user interface built with Tkinter, enhancing usability and efficiency for non-technical users.

- Impact: Enabled researchers to save time and increase productivity by automating document analysis and data extraction processes.
- Achievements: Secured 4th place at the national level in a competitive tech competition, demonstrating technical excellence and innovative problem-solving.