

Basel Ziada

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Summary

AI Engineer with 1+ years of hands-on experience in developing and integrating AI solutions. Skilled in Generative AI, LLMs, RAG, Agentic AI, Machine Learning, and Computer Vision. Experienced in building production AI applications and agentic workflows, integrating AI systems with real-world applications, external services, and MCP-based tools. Strong foundation in cloud technologies and end-to-end AI development, with a focus on reliable and scalable solutions.

Technical Skills

AI & Machine Learning: Machine Learning, Deep Learning, Generative AI, LLMs, RAG, AI Agents, Agentic AI, NLP, Computer Vision, Fine-Tuning, Model Evaluation, LLM Evaluation, AI Reliability

Frameworks & Libraries: PyTorch, TensorFlow, Keras, scikit-learn, Hugging Face Transformers, OpenCV, YOLO, LangChain, LangGraph

Programming & Data: Python, SQL, C/C++, NumPy, Pandas, Matplotlib, JSON, YAML

Tools & Platforms: Git, GitHub, GitLab, Linux, Docker, Jupyter Notebook, Gradio, VS Code

Cloud: Google Cloud Platform, AWS, Microsoft Azure, Huawei Cloud

Experience

OFOQ

Jul. 2026 – Sep. 2026

AI Engineer

- Develop AI agents, Agentic AI workflows, and RAG-based systems for real-world production AI applications, focusing on retrieval, context handling, and intelligent task execution.
- Integrate AI components with application workflows and external systems to support end-to-end intelligent functionality.
- Test and refine AI workflows to improve response quality, retrieval relevance, consistency, and overall system reliability in production environments.

Digital Egypt Pioneers Initiative (DEPI)

Nov. 2025 – Jul. 2026

AI & Data Science – Generative AI Professional Trainee

- Developed hands-on experience in Generative and Agentic AI, including LLMs, GANs, Transformer-based models, Prompt Engineering, NLP with Attention models, and Computer Vision.
- Applied Python, Hugging Face, and deep learning frameworks to build practical Generative AI solutions and agentic workflows.

Information Technology Institute (ITI)

Aug. 2025 – Sep. 2025

NVIDIA DLI Summer Training Program: Generative AI Trainee

- Completed 35 hours of training covering AI foundations, Generative AI concepts, and hands-on LLM application development.
- Built LLM applications using Prompt Engineering and Retrieval-Augmented Generation (RAG) techniques.

Information Technology Institute (ITI)

Aug. 2025 – Sep. 2025

Artificial Intelligence Trainee

- Completed 90 hours of hands-on Artificial Intelligence training covering Python, data preparation and exploration, probability and statistics, linear algebra, and numerical optimization.
- Applied Python-based machine learning workflows and built a deep learning project using neural networks.

Digital Egypt Pioneers Initiative (DEPI)

Oct. 2024 – May 2025

Microsoft Machine Learning Engineer Trainee

- Developed practical Python skills using NumPy, Pandas, and Matplotlib for data preparation, analysis, and visualization.
- Applied statistics and probability concepts to real-world datasets while developing practical machine learning workflows.

Education

New Mansoura University

Oct. 2022 – Jul. 2026

Bachelor's Degree in Artificial Intelligence

GPA: 3.8/4.0 (Excellent with Honors)

Rank: 1st in the Department

Graduation Project: NMU Dental Hospital Management System (Grade: A+)

Projects

VisualForge AI

Python, Stable Diffusion XL, LoRA, Hugging Face, Generative AI

- Developed an end-to-end Generative AI image generation pipeline built on Stable Diffusion XL, unifying 3 generation modes: Text-to-Image, Image-to-Image, and Inpainting within a single inference workflow.
- Applied parameter-efficient LoRA fine-tuning to Stable Diffusion XL for domain adaptation and integrated the

resulting adapters into the application pipeline for product advertising and Egyptian cultural visual generation.

QLoRA Fine-Tuning for Large Language Models

Python, Hugging Face, PEFT, TRL, BitsAndBytes, Gradio

- Built an end-to-end parameter-efficient fine-tuning pipeline for a causal LLM using QLoRA, LoRA adapters, and 4-bit NF4 quantization.
- Prepared conversational datasets, trained and evaluated the model using loss, perplexity, and qualitative comparisons, and developed an interactive Gradio interface for inference.

NMU Dental Hospital Management System

Deep Learning, Computer Vision, YOLO, Python

- Developed an AI-assisted computer vision module for analyzing panoramic dental X-rays and identifying multiple dental conditions.
- Built and integrated the inference pipeline into the hospital management system, providing localization boxes and confidence-based outputs to support clinical review.

Keyword Extraction Tool

Python, CustomTkinter, NLTK, scikit-learn, Transformers

- Built an NLP application for keyword extraction and text summarization using TF-IDF and Hugging Face Transformers.
- Developed an interactive desktop interface for text processing and result visualization.

Sign Language Recognition

Python, OpenCV, MediaPipe, TensorFlow Lite

- Developed a real-time sign language recognition system using computer vision and deep learning for gesture interpretation.
- Integrated real-time camera inference and visual feedback into an interactive application.

Publications

A Novel Sustainable AI Approach For Leveraging IoT Carbon Footprint Data For Real-Time CO₂ Monitoring and Quantification [\[Link\]](#)

3rd IEEE International Conference on Machine Intelligence and Smart Innovation (ICMISI 2026) | IEEE Xplore Second-Place Best Paper Award

A Novel CNN Approach For EEG-based ADHD diagnosis in children

Manuscript under review

Honors and Achievements

- **1st Place in North Africa & 2nd Place Worldwide**, Huawei ICT Innovation Competition Final 2025, Shenzhen, China, for **EVANA**, an AI-assisted surgical robotic arm system.
- **Platinum Medal**, Huawei ICT Academy Competition 2025–2026, Cloud AI Track; selected among the **Top 12 in Egypt** for the North Africa Regional Stage.
- **1st Place**, Smart Education Hackathon Banha 2024–2025, Interactive Learning Platform Track, for **Smile App**.
- **Silver Medal**, Huawei ICT Academy Competition 2024–2025, Cloud AI Track, nationwide.
- **6th Place**, People with Disabilities Hackathon Banha 2024–2025, Education Platforms Track, for **MeditroTalk**.
- **Gold Medal**, Huawei ICT Academy Competition 2023–2024, Cloud AI Track, nationwide.

Leadership & Volunteering

Microsoft Learn Student Ambassador – Microsoft Learn **Mar. 2025 – Jul. 2026**

- Promoted digital skills and organized 10+ technical events and workshops for the campus community.

Google Developer Group (GDG) Leader – Google Developer Groups **Mar. 2025 – Jul. 2026**

- Led the university developer community and organized 10+ technical events, hackathons, and workshops.

Hult Prize Campus Director – Hult Prize **Feb. 2025 – Jul. 2026**

- Led the campus program and managed a competition involving 30+ teams developing impact-driven startup ideas.

Huawei Cloud Ambassador – Huawei Cloud **Nov. 2024 – Mar. 2026**

- Organized workshops and technical sessions that strengthened cloud computing skills for 300+ students.

Huawei ICT Academy Ambassador – Huawei ICT Academy **Oct. 2024 – Jul. 2025**

- Promoted academy programs and certification pathways to 300+ students through awareness and engagement activities.