

Peter Atef

AI & Automation Engineer

Giza, Egypt

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Education

Cairo University

Bachelor of Computer Engineering, **Excellent Grade (GPA: 3.7)**

2019 – 2024

Military Status: Exempted

Experience

Ejada

AI Engineer

1/10/2024 - present

Egypt - Hybrid

- Embedding AI models in software solutions.
- Build and maintain backend services and APIs for agent workflows.
- Design scalable data pipelines and support RAG components (vector DBs, embeddings, etc.)
- Build Agentic AI solutions that can communicate with the outer world via tools.
- EDA and data analysis for numerical and text data.
- Skills: Python - Data Analytics - LLMs - NLP - Streamlit - FastAPI - Docker - RAG - Agentic AI.

Apes solutions

Freelance Mobile developer

1/8/2024 - 1/10/2024

Egypt - remote

- Developing mobile apps using Flutter in a creative way for Android and iOS
- Projects I participated in: Inspkvt - Views - Spark - Eventbeez - Radzoom - Hpadel - SDpadel.
- Skills: Flutter - Clean Code - Git - GitHub - Agile.

VNCR Media Group

Generative AI Internship

1/7/2023 - 1/10/2023

England - remote

- It's a great experience to be part of a company outside Egypt and have the chance to work on exciting projects and meet new people worldwide.
- **Technology used:** Langchain, Streamlit, OpenAI, Python, chromeDB, Faiss.
- *Certificate Link -Recommendation Letter Link*

Projects

KidAI | Unity, Agile, Python, C sharp, machine learning, Github, Team work

[Project Link](#)

- This is my graduation project, a tool that teaches kids aged 8 to 18 about machine learning through games. It guides them through the pipeline of creating datasets, training, validating, and testing models. One game focuses on image classification, allowing kids to capture or import images, train a model, and then play the game to learn about its behavior.

Transaction prediction | scikit-learn, machine learning, Python, data analysis

[Project Link](#)

- The goal is to predict if a customer will make a specific future transaction based on historical data. Santander seeks to develop a model to identify likely customers, regardless of transaction amount. We explored five models: Linear Regression, Adaboost, SVM, Random Forest, and XGboosting.

Arabic Text Diacritization | NLP, machine learning, Python, PyTorch

[Project Link](#)

- Arabic diacritics clarify pronunciation and meaning but are often omitted and inferred by native speakers. Restoring them benefits NLP systems like text-to-speech and machine translation by reducing ambiguity. We used two approaches to address this: a recurrent neural network (Bi-LSTM) with an embedding layer and the CBHG architecture.

Blog Writer Agent | LLMs, NLP, LangChain, Python, OpenAI, Hugging-Face, Vector database, Streamlit

[Project Link](#)

- During my internship at VNCR, I worked on a Blog Writer Agent designed to help users create blogs by entering a title, word count, and any specified resources.

Virtual Calculator | Image processing, OpenCV, machine learning, Python, Threading

[Project Link](#)

- Machine learning project for real-time hand detection of numbers and arithmetic operations. We used SVM, achieving 90% accuracy. My role involved image enhancements and accuracy calculations.

Hand Gesture Recognition | Image processing, OpenCV, machine learning, Python

[Project Link](#)

- A machine learning model detects hand-drawn numbers through effective image pre-processing and noise handling. Hand extraction is performed for accuracy, utilizing HOG, LBP, and PCA for features, with SVM as the model. My role focused on hand extraction using GMM and K-means, and implementing the LBP algorithm for feature extraction.

Loan acceptance | *Big data, cloud computing, data analysis, python, Algorithms, EDA, PySpark* **Project Link**

- The challenge was to develop a predictive model using the U.S. Small Business Administration's loan application data to determine approval or denial. We preprocessed the data with Spark, performed exploratory data analysis (EDA), visualized association rules, and used K-nearest neighbors (KNN) for predictions, along with machine learning techniques like logistic regression, random forest, and SVM.

Vector Database Indexer | *python, Algorithms, Data Structure* **Project Link**

- Main function is to search and retrieve the most relevant vectors concerning the input query. The challenge was to build an indexer that optimizes in memory and time and achieves that using vectorized techniques and algorithms like IVF, LSH

Search Engine | *Java, OOP, Data Structures, Threading, MongoDB* **Project Link**

- I worked on the Indexer, a pre-processing step prior to storing data in the DB, and contributed to building the website for a search engine that consists of a Crawler, Indexer, and Ranker.

Hospital management | *C-sharp, SQL, MySQL, Database* **Project Link**

- Developing a hospital Windows application to manage multiple users, user privileges, patient appointments, and medical history tracking. I participated in building the DB scheme and implementing the backend, and I built screens like a doctor, nurse, and patient screens.

Skills

AI: Python, PyTorch, Langchain, OpenAI, Hugging-Face, Vector databases, RAG, LLMs.

Agentic AI & Automation: Agentic AI Design Patterns, Agent Tools, Memory Systems for Agents, Knowledge Bases, CrewAI, Prompt Engineering, Microsoft Copilot Studio Basics, MCP server, LangGraph, n8n, RPA

Data analysis: NumPy, Pandas, Matplotlib, OpenCV, Scikit-learn, Streamlit

Developer Skills: Github, CI/CD, Linux and Bash scripting, SOLID Principles, clean code

Back-end: FastAPI, Flask

Front-end: Flutter, React, HTML, CSS

Soft skills: Microsoft Office, Teamwork, Presentation Skills.

Trainings & Courses

AI Summer Training - ITI Egypt **08/2022 - 09/2022**

Certificate Link

Egypt - remote

- Learning the fundamentals of Linear algebra, Probability, Machine-learning, and Deep learning

AI Summer Training - The National Telecommunication Institute (NIT) **07/2021 - 08/2021**

Certificate Link

Egypt - remote

- Learning data analysis using Python using Numpy, Pandas, and Matplotlib. Learning how to deal with supervised learning models with hands-on experience.

Achievements

Sprints & Microsoft **September 2025**

Sprints X Microsoft Summer Camp - AI & ML

Certificate Link

Udacity

April 2025

Advanced Natural Language Processing

Certificate Link

NVIDIA

Summer 2022

NVIDIA DLI Certificate for the successful completion of Fundamentals of Deep Learning.

Certificate Link

- Learning Fundamentals of Deep Learning from engineers working at NVIDIA by applying to the supervised learning pipeline using NVIDIA GPUs.

Orange Digital Center (ODC)

Summer 2022

Certificate Link

Project Link

- I got a fourth place over more than 50 other students in the Competitive Programming Hackathon by Orange Digital Center in C++. That really enhanced my experience in problem-solving and also meeting new people was a wonderful experience.

Cairo University: Faculty of Engineering

Spring 2023

Certificate Link

Project Link

- team and I secured first place in the maze-solving competition and second place in the line follower competition. We built a car to follow a track line in the minimum time and then used it to solve a maze. I contributed by creating an Android app in Java to send speed signals to the car, providing high-speed for straight lines and low-speed for curves.
- **Technology used:** Java, OpenCV, Image Processing