

MennatAllah Ibrahim Kamal

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Career Objective

Recent Computer Science graduate passionate about AI and machine learning, with hands-on experience in Natural Language Processing (NLP), Computer Vision, and Retrieval-Augmented Generation (RAG). Proficient in Python and frameworks like TensorFlow and PyTorch

Education

Bachelor of Computer Science and Information Technology
Ain Shams University

2020 – 2024

Internship

Machine Learning Intern, Singularity – Cairo, Egypt

Jan. 2025 – Present

- Collaborate with a team on an OCR project to extract product details and descriptions from PDFs using **YOLO**, **EasyOCR**, and **LaMa**, converting the output into a **JSON** file.
- Develop and manage a database by scraping data from Yahoo Finance and economic calendar events from Investing.com using **Selenium** and **SQL** Server.
- Retrieve data from the database and build a time series model to predict the volatility of the S&P 500 stock market using **online learning**, developing scripts for automated predictions.

Machine Learning Intern, Electro Pi – Cairo, Egypt

Aug. 2024 – Oct. 2024

- Developed an NLP-powered chatbot for Arabic text understanding using **RAG, LLM**, and **Flask for deployment**.
 - Designed and implemented an OCR system using **EasyOCR**, **TableCV** and **pyTesseract**, optimized for multilingual text extraction.
 - Built a lip-sync system integrating **speech_recognition**, **LLM**, **GTTS**, **lip-sync** and **gradio** to enhance animated
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Technical Skills

- Programming Languages:** Python, SQL
- AI Tools & Frameworks:** TensorFlow, PyTorch, Scikit-learn, NLTK, spaCy, OpenCV
- AI Expertise:** NLP, Retrieval-Augmented Generation (RAG), Model Fine-tuning, LLM
- Database Management:** MongoDB, SQL
- Software Development:** Flask

Certifications & Training

- **AI Training for Hiring, NTI** Sep. 2024 – Dec. 2024
- **AWS AI Track, DEPI** Apr. 2024 – Oct. 2024
- **HCIA Huawei AI Course, NTI** Jul. 2024 – Aug. 2024
- **AI and IOT(120h), NTI** Oct. 2023–Feb. 2024
- **Artificial Intelligence & Machine Learning, ITI** Jul. 2023 – Aug. 2023

Key Projects

- **IntelliResearch**
 - Created an AI-driven tool for analyzing and interacting with multilingual and MultiPDF documents.
 - Techniques: **(OCR) using Tesseract, question-answering pipelines using RAG system and lama 3.2 , report generation using LLM .**
- **Medical Chatbot (Graduation Project) [view project](#)**
 - Developed a virtual assistant for healthcare providers and Achieved 96% cosine similarity.
 - Techniques **fine-tuned BERT models**, sequence-to-sequence architecture for text generation, and API deployment with Flask.
- **NLP Arabic Sentiment Analysis [view project](#)**
 - Conducted sentiment analysis on Arabic reviews to predict user ratings and reach 84.2% accuracy.
 - Techniques: **Text preprocessing (tokenization, stemming, lemmatization) with NLTK**, word embeddings with Word2Vec, and model training using Transformer and LSTM for **Docker** for deployment
- **Skin Cancer Detection [view project](#)**
 - Built a deep learning model to classify seven types of skin diseases.
 - Techniques: **Convolutional Neural Networks (CNNs) with ResNet architecture**, data augmentation, and model fine-tuning.
- **Hotel Rating Prediction**
 - Designed a regression and classification system to analyze customer satisfaction.
 - Techniques: **Natural language preprocessing for reviews, feature engineering for structured data, and ensemble models (Random Forest, Gradient Boosting).**
 - Achieved high prediction accuracy for both regression and classification tasks.

Awards

- **Rank 2:** HCIA Huawei AI Course
- **Rank 5:** Arabic Sentiment Analysis (Deep Learning Competition, FCIS ASU 2023)
- **Rank 3:** Hotel Rating Prediction (Machine Learning Competition, FCIS ASU 2023)