Hajar Elsayed Elbehairy

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Summary

AI/ML Engineer with a strong background in deep learning, computer vision, and data analysis. Currently completing the ITI 9-month program, focusing on Artificial Intelligence and machine learning applications. Passionate about developing intelligent systems that solve real-world problems.

Education

- 9-Month Diploma (ITI) Information Technology Institute ,(MCIT) Ministry Of Communications And Information Technology , AI track ,Mansoura Branch   Oct 2024– June 2025
- Bsc,Artificial Intelligence,KafrElshiekh University   Oct 2020– June 2024

Internships

Generative AI Intern | Digital Egypt Pioneers Initiative (DEPI)

📷 *July 2024 – Oct 2024*

- Built and deployed AI and Generative AI models using MLOps tools like MLflow and Hugging Face, including developing GANs for content generation and NLP models with attention mechanisms.
- Designed and optimized prompt engineering strategies for large language models (LLMs) to enhance text generation and processing.

Artificial Intelligence Training | Samsung Innovation Campus

📷 *August 2023 – October 2023*

- Studied AI fundamentals, machine learning concepts, probability, statistics, and essential mathematics for data science with hands-on Python exercises.
- Applied data processing techniques using NumPy and Pandas, and developed supervised machine learning models for both structured and unstructured data.

Publications & Research

- **"Human Gait Recognition for Security Systems" - International Technology and Artificial Intelligence Forum (ITAF), Canadian International College (Oct 2024)**
    - Developed a novel security system utilizing computer vision and AI to analyze human gait patterns for non-intrusive identification
    - Research presented at ITAF 2024 International Conference "Foresights of Technology and Management within Emerging Developments"

Technical Skills

- **Programming Languages: Python, C, C++, HTML, CSS**
- **Machine Learning & AI: Supervised/Unsupervised Machine Learning, Bayesian ML, Reinforcement Learning, Deep Learning, Generative AI, Large Language Models, Time Series Analysis, Recommender Systems, NLP**
- **Deep Learning Frameworks: TensorFlow, Keras, CNNs, RNNs, LSTM, GRU**
- **Computer Vision: OpenCV, YOLO, Advanced Computer Vision, Image Processing**
- **Data Manipulation & Analysis: Pandas, NumPy, Data Cleaning, Data Exploration, Data Preparation**
- **Data Visualization: Power BI, Matplotlib, Seaborn, Plotly**
- **Big Data & Cloud Technologies: AWS, Spark, PySpark, Cloud Infrastructure for Big Data**
- **Statistical Methods & Optimization: Linear Algebra for ML, Probability & Statistics for ML, Numerical Optimization**
- **Software Development: OOP, Agile Methodologies, SQL/NoSQL Databases**
- **Tools & Libraries: TensorFlow, scikit-learn, NLTK, Selenium, Plotly, Matplotlib, Seaborn, Pandas, NumPy, OpenCV**
- **Version Control & Collaboration: Git, GitHub, VS Code**

Projects

- **Sentiment-Based Music & Poem Generator**
  Developed a system that generates music and poetry based on the sentiment of input text using NLP and content generation techniques.

- **Hate Speech Classification**
  Designed a machine learning pipeline using NLP techniques to detect and classify hate speech in text data.

- **Obesity Risk Prediction**
  Created a multi-class classification model to predict obesity levels based on user health and lifestyle attributes.

- **Email Generator – DEPI Graduation Project**
  Developed a personalized email generation tool using NLP methods to automate content planning and email drafting.

- **Clustering People**
  Performed unsupervised learning to group individuals based on demographic and behavioral patterns using clustering algorithms.

- **CWC2023 – Cricket World Cup Analysis**
  Conducted statistical analysis and visualizations on player and team performance in the 2023 Cricket World Cup using Python.

- **Sign Language Classification**
  Trained a convolutional neural network (CNN) to classify American Sign Language (ASL) alphabets from hand gesture images.

- **House Price Prediction**
  Applied regression models to forecast housing prices based on property features from the Kaggle housing dataset.

- **Email Spam Detection**
  Built and evaluated machine learning and deep learning models to classify emails as spam or not spam.

- **Graduation Project**
  A dual-system AI project focused on enhancing security through biometric gait analysis and real-time vehicle identification.
    - • Gait Recognition Security System
    Implemented DeepLabV3 for silhouette extraction and Gait Energy Image (GEI) analysis to identify individuals based on their walking patterns.
    - • Arabic License Plate Recognition System *(My Role)*
    Built a real-time detection and recognition system using YOLOv8 for vehicle localization and a custom character detection pipeline for recognizing Arabic license plates.

Certificates, Achievements & Competition

Certificates, Achievements & Competitions	Courses
• Kaggle Notebook Expert – 8 Bronze Medals	• Communicating Data Insights – DataCamp
• ECPC Problem Solving Competition	• Introduction to Relational Databases in SQL – DataCamp
• Huawei HCIA-AI	• Introduction to Object-Oriented Programming in Python – DataCamp
• Atta Digital Hackathon	• Introduction to Git – DataCamp

Volunteer Experience

- **IEEE Volunteer – Computer Vision Community**
  2022
- **IEEE Volunteer – Web Development Community**
  2023

Personal skills

- **Team Leadership & Collaboration**
- **Project Management**
- **Problem-Solving & Analytical Thinking (proficient)**
- **Communication & Presentation**
- **Research & Documentation**
- **Self-Motivation**
- **Teaching Skills**
- **Time Management**
- **Adaptability & Quick Learning**
- **Cross-Cultural Communication**
- **Technical Writing**
- **Decision Making**
- **Presentation Skills**