Mohamed Khaled Saad

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Objective

Intelligent Systems Engineering Undergraduate with a strong technical foundation in Machine Learning, Deep Learning, and Computer Vision. Passionate about leveraging data-driven solutions to solve complex engineering problems. Eager to apply academic knowledge and practical skills in building scalable AI models within a dynamic team. Committed to staying at the forefront of AI technology, with a proven ability to learn new technologies rapidly.

Experience

Data Science Trainee, DEPI (Digital Egypt Poineers) **November 2025 - present**
MCIT (Ministry of Communications and Information Technology)

- Intensive training in Data Science foundations, including data analysis, visualization, SQL databases, and Python-based workflows for extracting insights and building data-driven solutions
- Hands-on experience in Machine Learning and applied AI, covering model development, evaluation, and deployment-oriented practices using industry tools such as MLflow and Hugging Face.
- Completion of end-to-end projects and a capstone, applying the full data science lifecycle—from problem formulation and data preparation to model building and real-world business insight generation.

Computer Vision Trainee, National Telecommunication Institute (Remote) **July 2025 – August 2025**

- how to use deep Learning and computer vision algorithms to automate and perform any task or data-defined patterns.
- Introduce the major ideas, methods, and techniques of computer vision and pattern recognition. Develop different appreciations for various issues in the design of computer vision and object recognition systems based on deep learning techniques.

HCIA-Artificial Intelligence 3.5, National Telecommunication Institute (On-site) **June 2025- July 2025**

- Completed an 80-hour Artificial Intelligence course by Huawei Academy, covering Python programming, mathematics for AI, data analysis, machine learning, and deep learning.
- Acquired hands-on experience with AI development frameworks, Huawei AI platforms, and an introduction to quantum computing and cutting-edge AI applications.
- Able to design AI solutions using Huawei development tools and apply foundational knowledge of quantum computing in AI contexts.

Education

Bachelor of Intelligent Systems Engineering, Helwan National University **September 2022 – February 2027**

Projects

Disease Prediction:

- Built an AI-based Disease Prediction system that identifies probable illnesses based on user-input symptoms
- Handled 40 different disease categories based on user input with Dataset include 3,000+ Rows.
- Implemented the solution using a Support Vector Machine (SVM) model for accurate multi-disease classification and have Accuracy 96%.

Brain Stroke Detection:

- Developed a brain stroke classification model using ResNet50 to detect and classify CT images into Normal, Bleeding, or Ischemia categories and have an accuracy 97%.
- Automated classification into 3 stroke types, reducing doctor review time by 50%.
- Improved diagnostic speed and accuracy to assist doctors in early detection and treatment planning.

Brain Tumor:

- Built a U-Net-based deep learning model from scratch for brain tumor segmentation on medical images.
- Achieved a Dice Coefficient of 82%, demonstrating high accuracy in identifying tumor regions.
- Applied advanced image preprocessing and training techniques to enhance model performance in medical diagnostics.
- Trained model on 6,000+ medical slices for improved generalization.

Smart Enterance Gate System:

- Engineered a multi-modal biometric access control system on Raspberry Pi, integrating Computer Vision for face recognition with anti-spoofing liveness detection, alongside Fingerprint and RFID verification.
- Architected a fault-tolerant embedded solution featuring a custom Python Watchdog process to ensure continuous uptime and a multi-threaded serial bridge for asynchronous communication with ESP32 microcontrollers.
- Developed a comprehensive full-stack management suite, combining a PyQt6 real-time GUI for the gate interface with a Django web dashboard for user administration, device control, and detailed access logging.

Hospital Management System:

- Developed a full-stack Hospital Management System as both a web and desktop application to enhance communication between doctors and patients.
- Integrated dual platforms (web + desktop) increasing system flexibility by 60%.
- Enabled 100% access to patients' medical history and prescriptions online.
- Reduced appointment booking time by 40% through automation.

Courses

Artificial intelligence, Zewail University (Hyprid) **July 2023 – October 2023**

- Introduction about Artificial intelligence and it's Applications, Python Programming, Overview about Machine learning, Deep learning and Neural Network.
- Explore some Machine learning Models and it's benefit in Multiple Industries.

Mathematics for machine learning and data science, Coursera. **Self-Paced**

- A deep understanding of the math that makes machine learning algorithms work.
- Express certain types of matrix operations as linear transformation and apply concepts of eigenvalues and eigenvectors to machine learning problems.
- Statistical techniques that empower you to get more out of your data analysis.

Skills

Technical Skills:

- **Programming Languages**: Python, C++, Java
- **Machine Learning:** Supervised, Unsupervised Learning, Clustering
- **Deep Learning:** CNN, ANN, Transfer Learning
- **Frameworks & Libraries:** TensorFlow, Keras, PyTorch, OpenCV, Scikit-learn
- **Data Science:** Pandas, NumPy, Matplotlib, Seaborn, EDA, Data Cleaning
- **Web & Tools:** Flask, Streamlit, Git, GitHub, Jupyter Notebook, Google Colab
- **Embedded Systems:** Arduino, Rasbperry pi, Atmga 32,328
- **Computer Vision:** Image Classification, Segmentation, Object Detection
- **Databases:** MySQL, SQLite

Soft Skills:

- Problem Solving ,Time Management, Communication Skills, Teamwork, Adaptability

Languages

- **Arabic: Native**
- **English: B2**
- **Deutsch: Little**