Seifeldin Khaled

Machine learning Engineer

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Summary

I am a driven Computer Science student with a strong passion for AI, particularly in machine learning and deep learning. I am eager to apply my skills in a real-world internship, where I can contribute to innovative projects while gaining valuable industry experience and further developing my expertise.

Education

Bachelor of Science in Computer Science

Nile University, Giza, Egypt (Expected Graduation: 2025)

Experience

Tranee, Digital Egypt for professional initiative (DEPI) - October 2024 - present

- Enrolled in a 6-month MCIT-sponsored program focused on Generative AI and NLP, gaining hands-on experience with Generative AI, MLOps tools (MLflow, Hugging Face), and NLP models.

Industrial researcher, Nile university - August 2024 - October 2024

- Conducted industrial research focused on non-invasive diabetes detection techniques.
- Authored a comparative study evaluating Raman spectroscopy and infrared methods, utilizing a Random Forest classifier to analyze and compare performance

Intern, Mindset training - August2024 - September 2024

 Contributed to AI projects by enhancing Machine Learning (ML) and Deep Learning (DL) model performance through optimization and tuning techniques.

Skills

- Programming Languages: Python, C++, Java
- Machine Learning: SVM, Random Forest, Linear Regression, Logistic Regression, KNN
- Deep learning: CNN, DenseNet, MobileNet, EfficientNet, VGG
- libraries: pandas, NumPy, Matplotlib, seaborn, Keras, tensor flow, scikit-learn
- soft skills: leadership, problem solving, communication, teamwork

Projects

Non-Invasive Detection of Anemia

- Led a 5-member team for a graduation project aimed at detecting anemia and predicting hemoglobin (HGB) levels using medical imaging and metadata. The project is divided into two phases:
 - 1. **Anemia Detection**: Color features are extracted from images using the LAB color map and passed to a Random Forest classifier to classify.
 - 2. **Hemoglobin Level Prediction**: Metadata and image features are processed separately, and late fusion technology is applied to combine predictions for HGB level estimation.

Autism detection

- used CNN to detect autism for children with imaging datasets with high accuracy.

Lung Cancer Detection

Developed a deep learning-based model for lung cancer detection using the IQ-OTHNCCD dataset of CT scans. Employed DenseNet121 with data augmentation and SMOTE to address class imbalance. Achieved 99.55% test accuracy, with near-perfect precision, recall, and F1-scores across benign, malignant, and normal cases. This study highlights the potential of AI in automating and improving lung cancer diagnosis.