Youssef Moustafa

AI/ML Engineer | Data Scientist | Full-Stack Developer

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GitHub Profile | Kaggle Profile

Education

Cairo University, Faculty of Computers and Artificial Intelligence   Sept 2022 – June 2026
- GPA: 3.55/4.00
- **Coursework:** Computer Architecture, Machine Learning, Data Structures, Software Engineering, Algorithms, Operating Systems, Databases, Computer Networks, Image Processing

Experience

AI Member, Google Developer Student Club (GDSC) – Cairo University   Feb 2025 - May 2025
- Provided weekly tutoring sessions for fellow students in Machine Learning and Data Processing
- Collaborated in a team of 3 on a Kaggle data science project, applying data preprocessing, EDA, and ML modeling to solve a real-world challenge.

Participant, IEEE Student Club   March 2024 – May 2024
- Collaborated in a team to develop two mobile applications using Flutter, implementing efficient state management with Flutter Riverpod

Projects

AI Image Search Engine – RAG Application   GitHub Link
- Built a text-to-image search system using OpenAI's CLIP for embeddings and Pinecone for vector similarity, enabling semantic image retrieval from 500+ images
- Tools Used: Python, CLIP, Pinecone, RAG, streamlit

Face Recognition Attendance App   GitHub Link
- Developed a Python GUI application using AI-powered face recognition to achieve over 95% accuracy in automated attendance tracking while maintaining minimal latency for real-time performance
- Tools Used: Python, OpenCV, Face Recognition, NumPy, Tkinter

iSupply Product Matching – AI Hackathon Project   Kaggle Link
- Built an RNN-based NLP model with 99% accuracy to match inconsistent product names from seller CSVs to official names for accurate price updates
- Tools Used: Python, Pandas, TensorFlow, Keras, Scikit-Learn

Movie Wishlist Flutter App   Github Link
- Designed and developed a mobile app enabling users to search 1,000+ movies via real-time APIs, add to a wishlist, and manage favorites
- Tools Used: Flutter, Riverpod, TMDB API

OCR Pipeline – Computer Vision Project   Kaggle Link
- Designed an OCR and image processing system for noisy images, achieving over 80% accuracy, and benchmarked 4 models to improve real-world extraction performance
- Tools Used: Python, OpenCV, EasyOCR, Tesseract, PaddleOCR, Keras-OCR

BeBooky: FullStack Online Library Website   Github Link
- Designed and implemented a full-stack online library system with 7+ features, including book search, filtering, borrowing and CRUD operations
- Tools Used: Django, HTML, CSS, JavaScript, Figma, SQLite

React Jobs – React.js Project Github Link

- Developed a fully responsive job listing platform for React roles with **CRUD operations** using React.js and JSON Server; implemented **10+ job management features**, simulating a real-world job board experience.
- Tools Used: React.js, JSON Server, CSS, HTML

Classify Salary Range - Data Science Project Kaggle Link

- Achieved over 97% accuracy in predicting salary ranges using machine learning algorithms (Random Forest, XGBoost) with SMOTEENN balancing and hyperparameter tuning with GridSearchCV
- Tools Used: Python, Pandas, NumPy, Scikit-Learn

Skills

Programming Languages: C++, C, Java, Python, C#, SQL, HTML, CSS, JavaScript, Typescript, Dart

Frameworks and Tools: Flutter, React, Django, Ajax, Figma, Microsoft SQL Server, Firebase, Git, GitHub

Machine Learning: Data Preprocessing, EDA, Feature Engineering, Feature Extraction, Pandas, NumPy, Statistics

Machine Learning & Deep Learning Tools: PyTorch, TensorFlow, Scikit-Learn

Concepts: Problem Solving, Object-Oriented Design, SOLID principles, Complexity Analysis, GUI Development, Front-End Development, UI Design, Web Scraping, Automation, NLP, Computer Vision