

ASSEM ELQERSH

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SUMMARY

Fourth-year undergraduate student majoring in Computer Science Engineering at Egypt-Japan University, expected to graduate in 2026. Skilled in computer vision and machine learning, with proficiency in Python. Enthusiastic about developing and deploying vision-based AI solutions for real-world applications. Currently gaining hands-on experience in advanced deep learning techniques, aiming to apply skills to impactful projects and continue learning in a collaborative environment.

EDUCATION

Bachelor of Computer Science Engineering, Egypt-Japan University Expected 2026

Relevant Coursework: Algorithms, Data Structures, Computer Architecture, Operating Systems, Software Engineering, Embedded Systems, Computer Organization, Parallel Computing and Distributed Systems, Cryptography, Numerical Analysis, Deep Learning, Computer Vision, Robotics, and Advanced Programming.

SKILLS

AI/ML Frameworks PyTorch; TensorFlow; Keras; Scikit-learn; Hugging Face Transformers.

Computer Vision OpenCV; MediaPipe; Real-time Processing; Feature Extraction; Object Detection.

Deep Learning CNNs; RNNs; LSTMs; Transfer Learning; Model Optimization; CUDA Programming.

Specialized Medical AI; NLP (AraBERT); Arabic Text Processing; Algorithm Implementation.

Technical Skills Research; Academic Writing; Performance Benchmarking; Model Deployment.

Programming Python; C++; JavaScript; SQL; CUDA.

EXPERIENCE

Internship

Aug 2024 - Oct 2024

NeuronetiX (Remotely)

- Focused on data cleaning, preprocessing, and feature engineering.
- Gained hands-on experience in Machine Learning by working on real-world projects.
- Participated in live hackathons to sharpen collaboration and problem-solving skills.

Internship

Aug 2024 - Sep 2024

Mindset (Remote)

- Developed foundational knowledge in machine learning and deep learning, including CNNs and RNNs.
- Conducted statistical analysis and applied data visualization techniques.
- Gained hands-on experience in Python programming, data manipulation using Pandas and NumPy.

Internship

Aug 2024 - Sep 2024

Creativa Hub Alexandria (Onsite)

- Focused on data cleaning, preprocessing, and feature engineering.
- Learned data manipulation and time series analysis using Python's libraries in a hands-on training environment.
- Built simple data science models to reinforce understanding.

PROJECTS

MedFlow: AI Medical Assistance System ([View](#))

- Developed an AI-driven platform for medical diagnostics combining symptom assessment chatbot, X-ray image analysis, and clinical decision support
- Implemented deep learning models for detection in X-rays, including VDSR and SRGAN for image enhancement

Real-time Face Detection System ([View](#))

- Built dual-architecture face detection system with beginner and advanced implementations
- Implemented HOG detection, 68-point facial landmarks, and DeepFace integration with SQLite database
- Achieved real-time performance optimization with comprehensive algorithm comparison documentation

NewsLies: Arabic Fake News Detection ([View](#))

- Built an advanced Arabic fake news detection model using LSTM and AraBERT
- Leveraged the Arabic Fake News Dataset (AFND) to classify news articles as credible, not credible, or undecided

Sign-to-Text Translation System ([View](#))

- Created a web application that converts Arabic sign language gestures into text in real-time
- Implemented hand gesture tracking with MediaPipe and developed ML model for sign language recognition

Object Detection Applications ([View](#))

- Developed browser-based applications using TensorFlow.js for real-time object detection
- Created implementations for both CDN-based and Node.js environments
- Integrated multiple detection models including COCO-SSD and BlazeFace for various object recognition tasks

Face Mask Detection ([View](#))

- Developed real-time COVID safety system achieving 99.2% accuracy using PyTorch and MobileNetV2
- Optimized for mobile deployment with inference time under 100ms on 10K+ face dataset

Ishihara K-means Library ([View](#))

- Created medical computer vision Python package with CLI for color blindness detection
- Implemented K-means clustering algorithms specifically for Ishihara test analysis

SIFT Feature Extraction and Matching ([View](#))

- Implemented advanced object detection using SIFT algorithms, homography, and RANSAC

VOLUNTEERING

Treasurer, IEEE EJUST CS SBC

Oct 2024–Present

- Managed budgets for 10+ workshops and seminars, securing sponsorships to cover 100% of event costs.
- Coordinated major events including JAC ECC 2024 and RoboRave 2025, while representing EJUST at IEEE R8 CS SYP Conference 2024.

TechX Ambassador, IEEE CS SYP

Jan 2025–Present

- Organized hackathons and TechX events across 5 universities, engaging 200+ students and expanding IEEE program reach in the MENA region.

MENA SYP Ambassador, IEEE R8

Jun 2025–Present