Eslam Ashraf
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1 Education

Bachelor of Science in Computer Science
Canadian International College, Cairo, Egypt
GPA: 3.57/4.0

2 Technical Skills

- Programming Languages: Python,Java
- Frameworks & Libraries: PyTorch, TensorFlow, OpenCV, YOLOv8, NumPy, Pandas
- Tools: Git, Jupyter Notebook, Power BI
- Concepts: Machine Learning, Deep Learning, Computer Vision, Data Preprocessing, Feature Engineering

3 Projects

PCB Defect Detection Using Enhanced YOLOv8(Grad project) 2024–2025

- Developed an enhanced YOLOv8 model for detecting defects (e.g., opens, shorts, spurious copper) in Printed Circuit Boards.
- Integrated Coordinate Attention and Bi-Directional Feature Pyramid Network (BiFPN) to improve detection accuracy, achieving mAP50 of 97.9% and mAP50-95 of 81.8%.
- Utilized Eigen-CAM for model interpretability, visualizing critical regions in PCB images.
- Technologies: Python, PyTorch, OpenCV, Eigen-CAM

Land Cover Recognition Using Machine Learning 2024

- Built machine learning, deep learning, and pretrained models (e.g., ResNet) to classify land cover types from EuroSAT satellite imagery, improving environmental monitoring and urban planning applications.
- Compared model performance to identify the most effective approach for accurate classification.
- Applied data preprocessing and feature extraction to enhance model training.
- Technologies: Python, Scikit-learn, TensorFlow, Pandas, Jupyter Notebook

4 Publications

- Hassan, Y., Gerges, I., Ashraf, E., Alaaeldein, E., Abdallah, I., Ezzat, A., Mostafa, E., & Abdelghafar, S. (2025, March). A Mobile-Based Deep Learning Model for Printed Circuit Boards Defect Detection Using YOLO8 and Heatmap Visualization. In Proceedings of the 2025 International Conference on Advanced Machine Learning Technologies and Applications (AMLTA'25). Cairo, Egypt.
- Hassan, Y., Ashraf, E., Gerges, I., & Abdelghafar, S. (2025, June). Enhanced YOLO with Coordinate Attention and BiFPN for Printed Circuit Board Defect Detection. Submitted to the International Journal of Information Technology, Springer.

5 Certifications

- DeepLearning.AI: Supervised Machine Learning (Coursera), 2024
- IBM AI Engineering (In Progress), 2025

6 Soft Skills

- Problem-solving, teamwork, communication, time management