# Maya Elmosalamy

mayaelmosalamy@gmail.com / +201275540588 / Cairo, Egypt

## About

Aspiring AI Engineer with hands-on experience in computer vision, NLP, and predictive modeling. Strong foundation in Python, PyTorch, and applied machine learning. Eager to contribute to real-world AI systems in industrial automation, robotics, and digital twin technologies.

---

## Education

**Computer Science – Artificial Intelligence Major**

*Misr International University (MIU), Cairo, Egypt*

**Expected Graduation:** December 2026

Current GPA: 3.53

---

## Relevant AI & Software Projects

### Lane Detection using Deep Learning on TuSimple Dataset

• Misr International University –Advanced AI Project
04/2025 - 05/2025
Developed for autonomous driving and intelligent transport applications.

- Developed a lane line segmentation system using the TuSimple dataset and implemented three CNN-based models: U-Net, FastSCNN, and ENet in PyTorch.
- Designed custom PyTorch Dataset class for loading, normalizing, and augmenting road image and mask pairs with semantic segmentation techniques.
- Applied model training with weighted cross-entropy loss and evaluated using metrics such as Accuracy, Precision, F1-Score, IoU, and Confusion Matrix.
- Achieved high-performing results with U-Net.

### NLP Fake News Detection using Machine & Deep Learning

• Misr International University – Data Science Project
04/2025 - 05/2025

- Designed and implemented a bilingual fake news classification system using traditional ML (SVM, XGBoost, Naive Bayes) and deep learning (CNN, BiLSTM, GRU, BERT-based models).
- Preprocessed English and Arabic datasets (600K+ articles) with tailored NLP pipelines: lemmatization, TF-IDF, and tokenization; applied AraBERT and MARBERT for Arabic.
- Achieved 94% accuracy with SVM.

### Housing Prices Prediction - Machine Learning

02/2025 - 03/2025

- Utilized a Kaggle housing dataset for predictive modeling.
- Applied data preprocessing and model training using linear/logistic regression.
- Optimized performance with GridSearchCV and cross-validation techniques.

### Curve and Lane Detection - Image Processing

11/2024 - 12/2024

- Built a lane and curve detection system for video frames using Python.

- Implemented Hough Transform and custom Region of Interest (ROI) filtering, relevant for autonomous vehicle systems.

### Credit Card Approval Prediction - AI

11/2024 - 12/2024

- Cleaned and preprocessed applicant data; applied genetic algorithms for feature selection.
- Trained Decision Tree, KNN, and MLP classifiers; achieved 75% prediction accuracy.

### Healthcare Gemini Chatbot System - Software Engineering

09/2024 - 12/2024

- Developed a full-stack healthcare chatbot using JavaScript, PHP, Python, and MySQL.
- Enabled patients to ask medical questions, receive automated responses, and book appointments with doctors.
- Integrated authentication and dynamic scheduling, with persistent data storage.

### E-Commerce Clothing Website

03/2024 - 05/2024

- Built a responsive clothing e-commerce site with admin and customer panels using MERN Stack.
- Implemented product listings, user authentication, and order management.

---

## Certificates

- **Artificial Intelligence Fundamentals Program** – IBM SkillsBuild

---

## Skills

- **Programming:** Python, JavaScript, C++, Java, C#, PHP
- **ML Libraries:** PyTorch, Scikit-learn, Transformers, TensorFlow (basic)
- **Tools:** Google Colab, VS Code, Git, MySQL, OpenCV
- **Web/Full-Stack:** MERN Stack, REST APIs, PHP
- **Soft Skills:** Leadership, Communication, Fast Learner, Time Management, Documentation, Research

---

## Languages

1. **Arabic** (Native)
2. **English** (Intermediate)
3. **German** (B1 Intermediate)

---

## Extracurricular Activities

- Enrolled in university admission team.
- Currenly preparing for ECPC competition.
- Head of Media, Tuners Club MIU (2023–2024).
- Head of Media, ACPC Club MIU (2024–2025).
- Riseup Volunteer (2023-2024).
- Ushered in many events such as RiseUp 2024 and university conferences.