

# Hekmat Reda Samir

AI & Machine Learning Engineer

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## EDUCATION

B.Sc. in Artificial Intelligence | Benha University – Class of 2025

Cumulative GPA: 3.388 / 4.0

Graduation Project: Excellent

## TECHNICAL SKILLS

- Programming: Python, C++
- Machine Learning: Supervised/Unsupervised Learning, Model Optimization, Scikit-learn
- Deep Learning: Neural Networks, CNNs, Transformers (BERT, Sentence-BERT), PyTorch, TensorFlow
- Reinforcement Learning: Deep Q-Learning, OpenAI Gym
- NLP: Text Classification, Sentiment Analysis, Language Detection
- Data Analysis: Pandas, Matplotlib, Seaborn
- Other: Problem Solving, Software Engineering Principles

## PROJECTS

- Smart Farm System (Graduation Project – Excellent, 2025): Designed a smart agriculture platform combining IoT, AI, Computer Vision, and Web Development. Built real-time soil analysis with sensors and developed AI models for crop recommendation, irrigation estimation, fertilizer guidance, and disease detection. Created a web interface with monitoring, irrigation control, disease detection, and chatbot support.
- Lung & Colon Cancer Detection Model – Achieved 96% accuracy using ML classifiers and feature engineering.
- Language Detection using NLP – Built a deep learning model with 97% accuracy for multi-language classification.
- Sentiment Analysis using Transformers – Applied BERT for sentiment classification on social media datasets.
- Search Engine using Transformers – Developed a semantic search engine using Sentence-BERT and cosine similarity.
- Reinforcement Learning Game Agent – Built an AI agent with Deep Q-Learning to play a custom game.
- Sales Analysis (Data Science Project) – Analyzed sales data, created dashboards and insights.

## CERTIFICATIONS

- Deep Learning Specialization | Maharatech | 2023
- Machine Learning | Coursera | 2022
- AI & Machine Learning | ITI | Aug 2024 (132 hrs)
- Computer Vision & Deep Learning | Kaggle | 2023
- Python Programming | Faculty of Computers & AI | 2022

## INTERNSHIPS & TRAINING

- AI & ML Internship | ITI | Aug 2024 (132 hrs)
- Python Training | Faculty of Computers & AI | 2022
- Robotics Training | IEEE (CAR MAZE) | 2022

## **LANGUAGES**

- Arabic: Native
- English: Professional Proficiency

## **SOFT SKILLS**

- Public Speaking
- Mentoring
- Curriculum Design
- Communication & Teamwork
- Problem Solving
- Leadership