### Mahmoud Mohamed Mahmoud Ali Mahmoud

Al Developer | Computer Engineer
Resident in **Dubai, United Arab Emirates** (Available also in Abu Dhabi) **Nationality**: Egyptian

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GitHub: https://github.com/DoubleM01

Portfolio: https://doublem01.github.io/DoubleM/ (Full achievements & work)

# **Professional Summary:**

Dynamic AI Developer and Computer Vision Specialist with over 3 years of proven expertise in deploying cutting-edge AI solutions for medical diagnostics and sports technologies, driving measurable advancements in accuracy and efficiency. Expertise in deep learning, embedded systems, and real-time image processing, committed to bridging the gap between academic research and practical industry applications.

# **Professional Experience:**

- 1. Research Team Leader, Independent Medical AI Research Team September 2024 Present
  - Leading a remote team focused on developing AI-driven solutions for medical diagnostics and treatment, enhancing diagnostic accuracy and treatment efficacy through innovative AI technologies.
- 2. Software Engineer & Team Leader, Khater Sports, Egypt 2022 2023
  - Led the software development team in creating advanced sports technology solutions. Spearheaded middleware systems development for sports scoreboards.
- 3. AI Research Intern, Nan-Yang Polytechnic (NYP), Singapore July 2023
  - Designed a deep learning-based gait detection system achieving 84% accuracy.
- 4. Programming Lecturer and Instructor, IEEE BUE Programming Course 2024
  - Taught topics related to dynamic programming and algorithm design, providing hands-on learning experiences to future engineers.
- 5. Technical Coordinator, IEEE BUE SB 2020 2023
  - Organized technical workshops and led teams in national and international engineering competitions.
- 6. Co-Founder & Technical Lead, MYM Smart Home Solutions startup 2020 2022
  - Initiated and led the development of innovative home automation solutions integrating IoT technologies.

#### Technical Skills:

- Programming Languages: Python, C++, C#, MATLAB.
- AI Frameworks: TensorFlow, PyTorch, Keras, YOLO.
- Hardware Integration: NVIDIA Jetson, Raspberry Pi, Arduino.
- Cloud Platforms: AWS, Google Cloud.

Soft Skills: Communication skills, Problem Solving, Teamwork, Planning, Networking,
 Cross-Field Integration, Adaptability, Hard Working.

# **Top Projects:**

- 1. Detection of Spine Deformities Using Deep Learning Models
  - Implemented a 3-phase system including vertebral localization, lumbar spine analysis, and diagnostic phases, enhancing accuracy and diagnostic depth.
  - Tools & Libraries: Python, Roboflow API, Open-CV, MRI image processing

#### 2. Multi-Purpose Virtual Fitting Room

- Developed a comprehensive system for try-on AI model with 3D previews and size recommendation.
- Tools & Libraries: Python, SMPL-X, MediaPipe, YOLO, Open3D, Open-CV, Blender API, Easy-Mocap, NVIDIA Jetson Platform

#### 3. Basketball Scoreboard App

- Developed a scoreboard app integrated with stadium screens using Bluetooth and WiFi socket communication
- Tools: Xamarin, ESP32, Multi-threaded Programming, python, Raspberry PI

## **Education:**

- London South Bank University (LSBU)
  - Bachelor of Engineering Major in Computer Engineering
  - First Class Honours (UK-Grading scale)
  - Grade A (US-Grading scale)
- British University in Egypt (BUE)

## Certifications:

- Artificial Intelligence Training Program (Zewail City of Science and Technology)
- Building Deep Learning Models with TensorFlow (IBM): "Applied course insights to develop scalable neural networks for image classification."
- Introduction to Computer Vision (IBM): "Specialized in image segmentation and object detection using advanced OpenCV techniques."

## Achievements:

- Top 5 Research and Design projects at BUE Computer Engineering 2024
- Ranked 6th in UK degree at The British University in Egypt BUE
- Ranked globally in the top 500 at IEEEXtreme16.0
- 2nd place in software category at Intel ISEF Egypt 2018