**Yousef Ahmed Mohamed Gomaa**

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🎂 Date of Birth: 27 Aug, 2002

**Professional Summary**

Enthusiastic Mechatronics Engineering student specializing in Embedded Systems, Automation, and Control. Adept in Arduino, C/C++, Python, and MATLAB/Simulink. Passionate about software development, project management, and AI. Currently seeking an internship to apply technical and leadership skills. Interested in both industry and educational sectors. Experienced with ATmega, ESP-WROOM-32, and various sensors/modules. Currently studying AI and enrolled in Egypt’s Digital Pioneers scholarship (React.js & Node.js track).

**Education**

**Bachelor of Engineering – Mechatronics Engineering**  
*Mansoura University, Al Dakahlia, Egypt*  
**Sep 2021 – May 2026**  
GPA: 3.8 / 4.0

**Technical Skills**

* **Programming:** C, C++, Python, MATLAB, Git
* **Embedded Systems:** Arduino, RTOS, Communication Protocols, PID Control, ATmega, ESP-WROOM-32,
* **Hardware:** PCB Design in: (Proteus, EasyEDA) , Ultrasonic, IR, actuators, DHT11, LCD (I2C), Bluetooth modules
* **IoT Platforms:** Blynk, MQTT protocol, NRF
* **Tools & Frameworks:** MATLAB/Simulink, Arduino IDE, GRBL, Inkscape
* **Web Development:** React.js, Node.js (ongoing)
* **Soft Skills:** Team leadership, Agile, Project Management (PMP basics), Mentoring, Public Relations (PR)

**Work Experience & Activities**

**Team Leader – Luminous**  
*Sep 2024 – Present*

* Leading the team technically and organizationally, fostering collaboration and mentoring members.

**Software Head – Luminous**  
*Sep 2023 – May 2024*

* Led software track development, delivering embedded sessions and organizing technical campaigns.

**Embedded Systems Intern – ITI (Information Technology Institute)**  
*Jul 2023 – Aug 2023*

* Gained hands-on experience in microcontroller programming, debugging, and communication protocols.

**Instructor & Intern – Brainy n Bright**  
*May 2023 – Sep 2023*

* Taught Arduino, C, and Python to young students. Developed teaching and technical content.

**Key Projects**

* **IoT Smart Farm:** Designed a smart farm system using sensors and automation to monitor and control environmental parameters remotely.
* **Sumo Robot:** Lead a team in building a sumo robot for competition; managed all aspects of design and implementation.
* **CNC on RC Car:** Developed CNC movement using Arduino, GRBL, NRF, and Inkscape. Focused on software implementation.
* **Self-Balance Robot:** Coded PID logic with MPU6050 sensor for balance control using Arduino.
* **Smart Home System:** Integrated sensors (IR, DHT11), LCD, and password-secured control for home automation.
* **Bluetooth-Controlled RC Car:** Built system from scratch using Arduino, L298N, and Bluetooth modules.
* **Industrial Vibration Harvester:** Designed piezoelectric-based bump for energy harvesting and disaster scenarios.
* **Obstacle-Avoiding & Line Follower RC Cars:** Programmed with ultrasonic, IR, and servo sensors using Arduino.

**Competitions & Achievements**

* **YLF Industrial Solutions Competition – Top 4 Finish**  
  Presented a project addressing industrial problems; pitched ideas to senior officials including the Minister of Higher Education.
* **IEEE MUTEX Robotics Competition – Best Hardware Circuit Award**  
  Won Best Hardware Circuit Award with team in the IEEE MUTEX robotics competition.

**Courses & Certifications**

* Embedded Systems (Ministry of Communications Certified)
* Arduino, C, Python, Data Structures
* MATLAB & Simulink (Certified Onramps)
* Project Management Basics – PMP & Agile (Ongoing)
* AI & Data Science Foundations
* React.js & Node.js (Enrolled in Digital Egypt Pioneers Scholarship)  
  📁 [**All certificates available here**](https://drive.google.com/drive/folders/16jFVQXM-G3yjEyPhwM2Eb7kJjXXUCYzb)**:** <https://drive.google.com/drive/folders/1etCjO9YB5-BXUGNsR0LOeBNWaeSZKi4J?usp=sharing>

**Languages**

* Arabic: Native
* English: B2 (Intermediate – Upper Intermediate)