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/1etCjO9YB5-BXUGNsR0LOeBNWaeSZKi4J?usp=sharing

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Languages

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