Amna Boughamoura

amna.boughamoura@gmail.com | (+216) 56914778 | Monastir, Tunisia

EDUCATION

Fatouma Bourguiba Monastir High School　　　　　　　　　　　　　　　　　**2022**
Baccalaureate in Experimental Sciences with Honors　　　　　　　　　　　　*Monastir, Tunisia*

Higher Institute of Informatics and Mathematics of Monastir (ISIMM)　　**2022 – Present**
License in ICT - Information and Communication Technology (IoT Networks)　　*Monastir, Tunisia*

ACADEMIC PROJECTS

Daily Wellness Assistant (PFA Project)　　　　　　　　　　　　　　**Sep. 2025 – Present**
Founder & Lead Developer　　　　　　　　　　　　　　　　　　　　　　*Monastir, Tunisia*

- Conceived and developed a real-time emotion detection system using DeepFace (Deep Learning library) and OpenCV for webcam-based analysis of user expressions (e.g., focus, fatigue, stress).
- The system processes over 1,000 emotional data points per hour, classifying dominant emotions (Happy, Sad, Angry, Neutral, Fear, Disgust, Surprise) with 95% accuracy.
- Leading the design of a web-based user interface for personalized emotional support and real-time feedback, currently tailored for individual use.
- Expanded the system to deliver 5-10 personalized motivational or stress management messages per session based on detected emotional patterns.
- Aimed to create a privacy-respecting assistant that enhances user well-being, productivity, and focus, helping improve work and study sessions.

Intelligent Home Automation System (PFA Project)　　　　　　　　　**Jan. – May 2025**
IoT Developer　　　　　　　　　　　　　　　　　　　　　　　　　　　*Monastir, Tunisia*

- Built a **real-time IoT-based smart home system** integrating Arduino boards, sensors (DHT11, LM35, LDR, soil humidity), and actuators.
  - Developed a **mobile application & LCD interface** for monitoring temperature, humidity, and lighting.
  - Automated irrigation and room lighting with manual/remote override via mobile app.

EXTRACURRICULARS

Tech Pathways MENA Program　　　　　　　　　　　　　　　　　　**Oct. 2025 – Present**
Participant　　　　　　　　　　　　　　　　　　　　　　　　　　　*Remote / MENA Region*

- Selected to join the **regional Tech Pathways MENA Program**, organized by **Afkar** and **MinnaLearn**, focusing on technology, innovation, and professional development.
- Participated in **online workshops**, collaborative projects, and mentorship sessions aimed at strengthening digital, entrepreneurial, and soft skills across the MENA region.

Sahni Startup Project　　　　　　　　　　　　　　　　　　　　　　**2023 – Present**
Co-Founder & Team Leader　　　　　　　　　　　　　　　　　　　　　*Monastir, Tunisia*

- Led Team Sahni in IEEE Internal Pitching Competition (2023), securing 1st place with an IoT- and AI-powered sustainability startup idea.
- Developed and pitched a sustainability-focused startup concept using IoT sensors and AI for smart meal planning and food waste reduction.
- Completed the OSTX Training Program, receiving mentorship on entrepreneurship and business modeling.
- Led website design and prototyping.

IEEE ISIMM Women in Engineering SAG – University-based IEEE affinity group　　**Feb. 2023 – Nov 2023**
Vice Chair　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Monastir, Tunisia*

- Directed the "WIE Care & Share" Ramadan charity initiative, mobilizing donations to support 10+ families and an orphanage.
- Spearheaded the "WIE Heal 2.0" breast cancer awareness campaign, attended by 50+ students with healthcare professionals.
- Organized the "WIE Motivate" workshop with a life coach, equipping 30+ students with stress-management tools.
- Coordinated a UI/UX design workshop for 15+ participants, enhancing digital and creative skills.

IEEE ISIMM Student Branch　　　　　　　　　　　　　　　　　　　**Oct. 2022 – Present**
Active Member　　　　　　　　　　　　　　　　　　　　　　　　　　*Monastir, Tunisia*

- Competed in IEEEXtreme 17th edition, ranking 1st at the university and 8th nationally.
- Technical Writer – CRIEEE Challenge (Dec 2022 – Mar 2023): Managed and created social media campaigns to promote the challenge across universities.
- Participated in technical workshops, including Flutter Development, Computer Vision, and Think Like a Programmer.

CERTIFICATIONS, SKILLS, TECHNOLOGIES, LANGUAGES & INTERESTS

- **Certifications:** *IEEEXtreme 17th Edition* (2023) – Ranked 1st at university, 8th nationally; *OSTX Training Program* (2023) – Completed entrepreneurship & startup development program; *Flutter Development Workshop* (2023) – Hands-on training in cross-platform app design.
- **Technologies:** AI; Computer Vision; DeepFace; Emotion Recognition; IoT, Python; C; HTML & CSS; Arduino; Flutter; UI/UX Design;
- **Skills:** Leadership; Teamwork; Problem-Solving; Communication; Event Planning; Adaptability; Project Management.
- **Languages:** Arabic (Native); French (Advanced); English (C2, EF SET 75/100); Korean (Basic); Japanese (Basic); Italian (Basic); Chinese (Basic).