PERSONAL INFORMATION

Omar Wael Ayyad

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Nationality Egyptian

FIELD OF STUDY

Communications Engineering

PERSONAL PROFILE

Master's student in Communications Engineering with a solid academic background in wireless communications and Industrial IoT, holding a Bachelor's degree in Communications and Information Engineering. Completed a graduation thesis on the design and development of an autonomous UAV for fire detection and suppression. Has academic and project-based exposure to IoT communication protocols, IEEE 802.15.4–based networks, MAC layer concepts, and wireless sensor networks through coursework, simulations, and experimental projects. Possesses good programming skills in Python and C/C++, familiarity with reinforcement learning concepts, and a strong interest in research activities related to AI-assisted networking. Motivated, detail-oriented, and able to work independently as well as within academic research teams.

WORK EXPERIENCE

June 2024 – June 2025

Information Technology Administrator

Raya Electric for Manufacturing

Provided technical support for enterprise systems and users, assisting in system deployment and maintenance using SCCM, MDT, and WDS. Supported software updates, endpoint security, help desk operations, and Active Directory management, while contributing to compliance with ISMS and ISO-related procedures.

August 2019 – December 2022

Software Engineer

OBM Education Company

Contributed to software development and digital transformation projects, focusing on website and application development. Assisted in maintaining and improving digital platforms in collaboration with technical teams.

October 2022 – May 2023

Junior Teaching Assistant

Zewail City of Science and Technology

Assisted in teaching undergraduate courses in Fundamentals of Computer Programming, Object-Oriented Programming, and Database Management Systems. Supported lab sessions, graded assignments, and provided guidance to students on programming and database concepts.

EDUCATION AND TRAINING

September 2025 – Present

Master of Science (M.Sc.) in Communications Engineering

Alma Mater Studiorum – University of Bologna, Italy

September 2020 – June 2025

Bachelor of Science (B.Sc.) in Communications and Information Engineering

University of Science and Technology at Zewail City, Egypt

Graduation thesis: *Design and Development of a UAV for Fire Detection and Suppression*

October 2017 – July 2020   **High School Diploma**

The Red Sea STEM School, Hurghada, Egypt

PERSONAL SKILLS

Mother tongue   Arabic

Other languages

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English C2	C1	C2	C2	C1

Digital skills
- – Programming: Python, C/C++, JavaScript, TypeScript
- – Networking and IoT: IEEE 802.15.4, ESP8266, MQTT, LoRa, NB-IoT
- – Robotics and Automation: PX4 (Pixhawk), MAVLink, MAVROS, ROS, Raspberry Pi
- – Simulation tools: MATLAB, Simulink, Cisco Packet Tracer
- – Web technologies: React.js, Next.js, Node.js

Organisational skills   Ability to manage technical tasks independently, collaborate within multidisciplinary teams, and adapt to research-oriented and industrial environments.

Communication skills   Clear technical communication developed through teaching assistance, team-based engineering projects, and academic research activities.

ADDITIONAL INFORMATION

Research interests   Industrial IoT, AI-assisted MAC protocols, wireless sensor networks, energy-efficient communications, and intelligent networking systems.