

Omar AbdElSalam Mohamed Hefny

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Passionate about data science and machine learning, with expertise in Python, MySQL, and a major specialization in communication and electronics. As an optics researcher, I aim to apply my skills to drive innovative and impactful solutions.

EDUCATION

Alexandria University

Alexandria, Egypt

Bachelor of Engineering in Electronics and Communication Relevant

Courses: Data Structure, Probability Theory, Linear Algebra

October 2021 – July 2026

Cumulative GPA: 3.66 / 4.0 (Excellent)

Victoria College Language School

September 2007 – August 2021

- Studied a diverse curriculum including Mathematics, Science, and Advanced English.
- Actively participated in various extracurricular activities, fostering teamwork and leadership skills.
- Consistently ranked among the top-performing students every academic year.
- Winning the first place in mathematical Olympiad competition.

PROJECTS

Laptop Brightness Control

Python – OpenCV

- Developed a system to control laptop brightness using Python and the OpenCV library.
- Designed a system to control laptop brightness using finger gestures detected by a webcam.

Communication System Noise Filtering

C Programming Language – MATLAB

- Developed a communication system to filter noise from signals using MATLAB.
- Applied advanced signal processing techniques to improve signal clarity.

Hex Keypad Encoder

Logic design – Proteus

- Built a Hex Keypad Encoder using combinational and sequential circuit principles.
- Implemented the design with digital ICs and validated functionality through Proteus simulation.

Experience

DEPI Data Science and Soft Skills Intern (Ongoing)

October 2024 – Present

Python – MySQL – Databases – Data analysis

- Currently learning data science concepts, data analysis techniques, and enhancing soft skills.
- Built robust machine learning models using authentic datasets, fostering enhanced communication among team members and improving decision-making processes in data-centric initiatives while addressing the three primary causes of previous delays.

Sub-Team Member & HR, IEEE SSCS Alex SC

March 2024 – May 2024

CADENCE VIRTUOSO – ORCAD PSPICE

- Participated as a sub-team member and Human Resources (HR) representative in the IEEE SSCS Alexandria Student Chapter.
- Gained experience in human resources, including team coordination and communication skills.
- Developed a solid understanding of electronics basics through hands-on projects and discussions.
- Collaborated effectively within a team, learning the dynamics of teamwork and leadership.

Assistant Researcher

July 2023 – Present

MATLAB – LATEX – MATHEMATICA – NUMERICA

- Conducted research in the optics field, focusing on Fiber Bragg Grating (FBG) and Tilted Fiber Bragg Grating (TFBG) technologies.
- Explored various types of modes and their applications in optical systems.
- Investigated photoacoustic materials and their role in optical sensing and imaging.
- Gained expertise in technical writing, search techniques for scientific literature, and advanced problem-solving for complex equations in optics research.

Extra-Curricular Activities

Participant, UCCD Employability Skills Program

September 2023

- Participated in the University Center Career Development (UCCD) program, focusing on enhancing employability skills.
- Developed key skills in presentation, negotiation, and teamwork through interactive workshops and exercises.
- Gained hands-on experience in effective communication, professional collaboration, and problem-solving in team settings.

Participant, International Sustainable Development Aims

March 2019 – December 2019

- Represented the school in collaboration with the British Council, focusing on environmental issues and sustainable development goals.
- Conducted research and contributed to discussions on sustainability practices and solutions for global challenges.
- Gained valuable experience in research, public speaking, and presenting environmental findings to a global audience.

Skills

Languages: Arabic (Native), English (Advanced).
Programming Languages: C, CPP Arduino, Python, SQL, Java.
Tools: Git.
Non-Technical Skills:
Microsoft PowerPoint, Microsoft Word, Presentation Skills, Time Management, Canva.

Courses and Certificates

Foundational Mathematics for Data Science and Machine Learning (Udemy)	August 2024
Python Programming Certificate (Udemy)	July 2024
Arduino Courses Level 2 Certificate (Smart Technology Company)	July 2023 – August 2023
Arduino Courses Level 1 Certificate (Smart Technology Company)	January 2023 – February 2023