

Curriculum Vitae

Maged Badawi

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Educational Qualification:

Master's degree in Medical Engineering (Medical Image and Data Processing):

University of Erlangen-Nuremberg - Erlangen, Germany

2022 - Present

- **Master's Thesis:** Artificial Neural Network-based Volume Conductor Solver for Spinal Cord Stimulation Applications (In Progress)
- **Description:**

Bachelor's degree in Systems and Biomedical Engineering (5 years degree):

The higher Institute of Engineering in Al-Shorouk City (SH.A.) - Cairo, Egypt

2016 - 2021

- **Graduation Project:** AR in Education
- **Project Description:** A medical mobile application for addressing the educational challenges by stimulating human memories using augmented reality technology developed by Unity engine in an interactive way.

Ideal Student Title:

The higher Institute of Engineering in Al-Shorouk City (SH.A.) - Cairo Egypt

2021

Learner:

The American University in Cairo (AUC) - Cairo, Egypt

2020 - 2021

Professional Experience & Internships (~2 years 7 months):

Biomedical Engineer (Part-Time):

Siemens Healthineers HQ - Erlangen, Germany

May 2023 - Present

- ExpertGuidance.
- SmartSimulator (incl. ATFlightSimulator).

Field Service Engineer (Full-Time):

AXA Medical - Cairo, Egypt

Sept. 2021 - Mar. 2022

- **Installation, troubleshooting and Maintenance** of Medical Equipment.
- **Providing Training** for the medical staff.
- ICU & OR Equipment.

Service Engineer (Full-Time Intern):

EGMED - Cairo, Egypt

22nd Aug. - 22nd Sept. 2021

Service Engineer (Full-Time Intern):

BASHIRKO - Jeddah, Saudi Arabia

18th Aug. - 19th Sep. 2019

Clinical Engineer (Full-Time Intern):

International Medical Center (IMC) - Cairo, Egypt

6th Jul. - 13th Jul. 2019

Service Engineer (Full-Time Intern):

AMICO - Jeddah, Saudi Arabia

5th Aug. - 13th Sept. 2018

Service/Clinical Engineer (Part-Time Intern):

Mansura University Hospital - Mansoura, Egypt

8th Jul. - 26th Jul. 2018

Technical Certificates:

Medical Device Regulation.

Sept. 2024

Applications of Nanotechnology in Cardiovascular Diseases.

Jan. 2023

Python and Raspberry Pi Workshop.

Jun. 2019 - Jul. 2019

Analog and Digital Workshop.

Jun. 2018 - Jul. 2018

MATLAB.

Jul. 2018

Arduino Workshop.

Oct. 2017 - Feb. 2018

Computer, Technical Skills & Scientific Knowledge:

- Computer Skills including (MS Office, Internet, HTML, CSS, Azure DevOps, Power BI & AutoCAD).
- Intermediate proficiency in programming Languages (C, C++, & C#).
- Intermediate to advanced proficiency in programming languages (Python & MATLAB + Simulink).
- Proteus (Electrical and Electronic Circuits).
- Embedded Systems (C programming with PIC & Python with Raspberry Pi).
- Electronic & Electrical Concepts.
- Human Body Anatomy and Physiology.
- X-RAY, CT and MRI Machines Concepts and their Basic Components.
- Machine Design, Fluid and Thermodynamics basics and concepts.
- Networks and IT, data structure and data base (SQL).
- Bioinformatics.

Projects & Scientific Papers:

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|---|-----------|
| - Rehabilitative Game-based System for Enhancing Physical and Cognitive Abilities of Neurological Disorders. | Mar. 2025 |
| - Chest X-Ray Images Classification Using Deep Learning: Normal, Pneumonia (Bacterial and Viral), and Tuberculosis. | 2024 |
| - Review of Zero-Shot and Few-Shot AI Algorithms in The Medical Domain. | Jun. 2024 |
| - Flat-panel CT reconstruction. | 2022 |
| - Deep learning fully connected layers model. | Oct. 2021 |
| - Embedded System circuits using PIC and C programming. | 2021 |
| - ECG signal processing tool(Filtration, Heart rate, FR and histogram) using MATLAB. | 2021 |
| - Prototype Mini Automatic Garage using Raspberry pi and python. | 2021 |
| - Fingerprint Classification model using MATLAB. | 2021 |
| - Bioinformatic tool for the classification of DNA Cancer sequences using Python. | 2020 |
| - ECG Filtration Circuit (Hardware.) | 2020 |
| - Infusion Pump (Hardware and Software) using raspberry pi and Python. | 2019 |
| - Feasibility Study of a Hospital (Hospital design and medical planning.) | 2019 |

Competitions:

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| 1 st Ideal Student for the academic year 2020/2021 competition. | Sept. 2021 |
| 3 rd place of Science-Clubs Competition. | Apr. 2021 |
| 2 nd place of IEEE ROBO BOND 007 Competition. | Apr. 2018 |

Volunteering & Activities 2018-2021:

Marketing Member at IEEE Al-Shorouk Academy.
Researcher at The Ministry of Higher Education.
Irregular volunteer at Ressala Charity.
Technical Support at IEEE Al-Shorouk Academy.

Languages Proficiency:

Arabic: Native.
English: Professional Proficiency.
French: Elementary Proficiency.
German: Elementary Proficiency.

References are available upon request.