# Maged Badawi

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## Education

**University of Erlangen-Nuremberg**, Master's in Medical Engineering (2022 – Present)

- Specialized in Medical Image and Data Processing, optimizing technologies for medical applications.
- Master's Thesis: **Artificial Neural Network-based Volume Conductor Solver** for Spinal Cord Stimulation Applications (In Progress).
- Improved simulation processing efficiency by 20% as part of the thesis research.

**The Higher Institute of Engineering**, Bachelor's in Systems and Biomedical Engineering (2016 – 2021)

- Graduated with honors in a 5-year degree program.
- Designed a **Medical Mobile Application** using Augmented Reality for memory stimulation.
- Graduation Project: **AR in Education - Medical Mobile Application**, enhancing interactive learning.

## Professional Experience

**Biomedical Engineer (Part-Time)**, Siemens Healthineers HQ (May 2023 – Present)

- Led the development of the **ExpertGuidance** project, streamlining medical imaging workflows and boosting efficiency by 15%.
- Contributed to SmartSimulator, enhancing ATFlightSimulator features, improving user satisfaction by 30%.

**Field Service Engineer (Full-Time)**, AXA Medical (Sept 2021 – Mar 2022)

- Installed, calibrated, and maintained ICU and Operating Room equipment, reducing downtime by 25%.
- Trained over 50 medical professionals on advanced medical equipment, reducing operational errors by 10%.

## Internship Experiences

- **Service Engineer Intern**, EGMED (Cairo, Egypt) – Aug 22 - Sept 22: Enhanced diagnostic equipment performance, improving accuracy by 12%.
- **Service Engineer Intern**, BASHIRKO (Jeddah, Saudi Arabia) – Aug 18 - Sep 19: Assisted with implementing new hospital imaging systems.

## Technical Certificates

- Medical Device Regulation (Sept. 2024)
- Applications of Nanotechnology in Cardiovascular Diseases (Jan. 2023)
- Python and Raspberry Pi Workshop (Jun. 2019 - Jul. 2019)

## Technical Skills

**Computer Skills:** MS Office, Internet, HTML, CSS, Azure DevOps, Power BI, AutoCAD
**Programming Languages:**

- Intermediate: C, C++, C#
- Advanced: Python, MATLAB + Simulink

**Technical Knowledge:**

- Embedded Systems: C programming with PIC, Python with Raspberry Pi
- Medical Technologies: X-RAY, CT, MRI Machines
- Data Science: Bioinformatics, Data Structure, Database (SQL)

## Projects & Scientific Papers

- Rehabilitative Game-based System for Enhancing Cognitive Abilities of Neurological Disorders (2025): Designed and developed a system to improve rehabilitation outcomes by 20%.
- Chest X-Ray Images Classification Using Deep Learning (2024): Developed a classification model with 95% accuracy in disease detection.

## Competitions & Achievements

- 1st Ideal Student for the academic year 2020/2021 (Sept. 2021)
- 3rd place in Science-Clubs Competition (Apr. 2021)

## Volunteering Activities

- Marketing Member at IEEE Al-Shorouk Academy
- Technical Support at IEEE Al-Shorouk Academy

## Languages

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

References available upon request