



# YASSIEN TAWFIK

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Biomedical Engineer

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## SUMMARY

Biomedical Engineering student at Cairo University, engaged in hands-on projects on medical device calibration and digital health applications. Committed to leveraging technology for healthcare advancements. Seeking internship opportunities to apply my technical knowledge in practical, innovative healthcare settings.

## EDUCATION

### Cairo University

Bachelor's Degree in Engineering - Biomedical Major  
2021 - Present

## PERSONAL PROJECTS

- **SigmaVision**
  - App for fast image segmentation using Otsu, spectral, K-means, and region growing. [GitHub Link](#)
- **SIFT-See**
  - Toolkit for feature extraction using Harris corner detector and SIFT algorithm. [GitHub Link](#)
- **EdgeEnhance**
  - Toolkit for edge detection using Hough Transform and Active Contour models. [GitHub Link](#)
- **CTG Heart Failure Monitoring System**
  - Monitors and analyzes HRV and FHR signals to detect health abnormalities. [GitHub Link](#)
- **Automated Defibrillator System**
  - ECG-integrated system for automated cardiac event response. [GitHub Link](#)
- **Dynamic Multi-Channel Signal Viewer**
  - Desktop application for enhanced medical signal visualization and management. [GitHub Link](#)
- **Z-Domain-Filter**
  - Designing and analyzing digital filters, featuring real-time updates. [GitHub Link](#)
- **Soundprints: Audio Fingerprinting App**
  - Audio recognition and mixing app using spectrogram-based fingerprinting. [GitHub Link](#)
- **Image-FT-Mixer**
  - FT-based tool for image component mixing with customizable frequency regions. [GitHub Link](#)
- **Beamforming Simulator**
  - Simulation for analysis in telecommunications and medical imaging. [GitHub Link](#)
- **Syringe Pump**
  - Precision medication dispensing system with advanced safety features. [GitHub Link](#)
- **Hospital Website**
  - Developed a secure and comprehensive hospital management system. [GitHub Link](#)

## CERTIFICATIONS

- Biomedical Training - Baheya Foundation
  - Medical Devices Calibration
- [Click Here](#) to see the Certificates

## PROFESSIONAL EXPERIENCE

### Biomedical Engineering Trainee

Baheya Foundation | 2024 - 90 Hours

- Gained comprehensive insights into clinical engineering and medical planning.
- Worked with medical devices across multiple departments, including pathology, sterilization, therapy, physiotherapy, and diagnostics.
- Developed skills in the hardware and electronic components of medical devices, focusing on their maintenance and calibration to ensure optimal performance.
- Attended sessions covering hospital systems beyond tumor-focused care, broadening my understanding of various healthcare environments.

## COMMUNITY ENGAGEMENT & EXPERIENCES

<b>Program Ambassador</b>	British Council "Taqaddam"   2018 - 2020
<b>Swimming Coach</b>	Swimming Star Academy   2020 - 2021
<b>Math Teaching Assistant</b>	Mr. Omar Sherbiny   2021 - 2022
<b>Operation Room Member</b>	Ministry of Youth and Sports (YLY)
<b>Event Organizer</b>	In The Zone   2023 - 2024
<b>Skydiving Instructor</b>	Al Galaa Airborne   2019 - 2022

## SKILLS

- **Biomedical Expertise:** Biomedical device calibration.
- **Digital Signal Processing:** Manipulating signals by digital techniques
- **Data Structures:** Understanding of data structures and their Apps
- **Deep Learning:** Basic knowledge of deep learning principles.
- **Web Development:** HTML CSS JavaScript
- **Software Proficiency:** MATLAB, MS Word, Excel, and PowerPoint.
- **Technical Writing:** Preparing technical documents and educational materials.

## INTERESTES

- **Physics & Math:** Passionate about physical principles and mathematical theories.
- **Sports:** Engaged in various sports to maintain fitness, discipline, and a healthy lifestyle.