

Daniel Elabd

BIOMEDICAL ENGINEER · ELECTRONIC AND ELECTRICAL ENGINEERING

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Summary

Passionate, focused, highly adaptable. Graduated with BEng in Electronics Engineering and a Master's degree in Biomedical Engineering, in the interest of my aspiration, that is to work as an electronics engineer in a biomedical field. Professional experience with a wide range of projects, including stretchable sensors, bioelectronics, PCB design, programming, and AI. Able to balance multiple priorities at once and have a keen eye for detail. A driven individual who strives to overcome challenges and learn new things.

Education

Imperial College London

South Kensington, London

MSC IN BIOMEDICAL ENGINEERING WITH NEUROTECHNOLOGY (MERIT)

Oct. 2020 - Sep. 2021

- RESEARCH PROJECT: Printed Stretchable Sensors (Distinction)
 - Contributed towards the development of stretchable sensors to enhance physiological monitoring and soft robotic sensors
 - Used an 'Allevi' 3D bioprinter to print sensors such as strain gauges with custom-made inks made of elastomers & conductive particles
 - Used lab equipment such as semi-conductor analysers to test device resistance and other electrical & mechanical properties
 - Participated in the Hamlyn Symposium on Medical Robotics 2021 by submitting a **poster** presentation on stretchable sensors.
- KEY MODULES: Biomimetics, Brain-Machine Interfaces, Neuroscience, Reinforcement Learning, Human Neuromechanical Control & Learning

University College London

Bloomsbury, London

BENG IN ELECTRONIC AND ELECTRICAL ENGINEERING (FIRST CLASS HONOURS)

Sep. 2017 - Jul. 2020

- INDIVIDUAL PROJECT: Electrocardiogram Waveform Acquisition (First)
 - Contributed towards the miniaturisation of ECG recording circuitry for more convenient patient monitoring
 - Designed and simulated bioelectronic circuits and designed corresponding PCB schematics
 - Soldered components and performed hardware testing using lab equipment
 - Acquired a range of research skills such as data collection, report writing and critical thinking.
- GROUP PROJECTS:
 - Participated in over 7 different design and innovation projects involving circuitry & PCB design, signal processing and programming
 - Developed skills including effective communication, teamwork and problem solving amongst colleagues of different disciplines
- KEY MODULES: Analogue Electronics, Digital Design, Object-Oriented Programming, Control Systems and Digital Signal Processing
- MINOR: Entrepreneurship. Participated in group projects to generate business ideas and implement them as start-ups.

The British School

Cairo, Egypt

A-LEVELS: PHYSICS (A*), MATHS (A*), INFORMATION & COMMUNICATION TECHNOLOGY (A)

Sep. 2013 - Jul 2017

IGCSES: 8 (A* - B) INCLUDING MATHEMATICS, DOUBLE SCIENCE, ENGLISH

Industry Experience

Smart Systems Egypt

Cairo, Egypt

SYSTEMS DESIGNER INTERN

Mar 2022 - present

- Designing security solutions to fulfill end-user's requirements by analysing AutoCAD drawings & incorporating involved network elements.
- Communicating with potential partners to expand the company portfolio and product range.
- Creating financial quotations for designs and sending them to potential clients.

MARSES Robotic Solutions

Cairo, Egypt

ROBOTICS ENGINEER TRAINEE

Feb. 2022

- Worked with an electronics engineer in designing circuits & PCBs for robot customisation & understood circuits involved in robot design.
- Experienced how mechanical design restrictions can alter electronic circuit design.
- Performed calculations yielding UV intensity and exposure durations that shaped the design of an autonomous UV disinfection robot.
- Understood manufacturing processes and company procedures through daily training workshops.

Tuplast SAE

Cairo, Egypt

ELECTRICAL ENGINEER TRAINEE

Jul. 2018

- Gained a deep understanding of all the manufacturing systems involved in the production of aluminium medical tubes.
- Worked alongside engineers to resolve electrical and mechanical faults in production machinery.
- Gained an understanding of the SCADA control systems driving the production machinery.
- Modified and enhanced the stock system for the plant warehouse to ensure production requirements are met.

Skills

Programming	Python, Java, C, Embedded C (beginner), MATLAB, 𐌆𐌹𐌸
Artificial Intelligence	Reinforcement Learning (beginner), Deep Q-Learning, PyTorch
Software Packages	DipTrace/KiCad (PCB design), Multisim (SPICE), Simulink (beginner)
Languages	English (fluent), Arabic (native), French (basic)

Positions of Responsibility

Co-Founder & Social Media Manager of the Egyptian Society at UCL

2019 - 2020

Youth Leader at St Mark's Coptic Orthodox Church

2017 - Present

Scouts Leader in St Paul's Scouts Group

2019 - 2021

Volunteer in Egypt's rural areas

2016 - Present