

# Alaaeldin Sengab

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## Personal Statement

BEng Bioengineering student in my penultimate year at the University of Sheffield. I am searching for scheme where I can apply and enhance my laboratory skills, engineering and research skills. I am a very ambitious, inquisitive and analytical thinker and an excellent team player and I am currently searching for a research experience.

## Education

University of Sheffield – **2018-2021** – Bioengineering – Medical Devices & Systems stream.

Key Skills:

- **Excellent practical laboratory experience.**
- High level of experience in CAD design, MATLAB & Python.
- **Write technical reports providing supporting research evidence.**
- Design, develop & integrate mechatronic devices.
- **Strong technical skills.**

Relevant Modules:

- **Engineering with living systems (70%)**                      - Medical Imaging (70%)                      - Mechatronics (ongoing)
- **Tissue structure and functions (72%)**                      - **Biomaterials (76%)**                      - **Modelling analysis (86%)**

Foundation On-campus Hull University – [2017-2018](#)

- Subjects: **Mathematics (100%)**, Physics (91%), **Skills of science (85%)**.

Mansoura College International Schools – [2015-2017](#)

- 8 IGCSE (grades 7A\* & B) including: Biology (A\*), Physics (A\*), Chemistry (A\*), Mathematics (A\*), ICT (A\*).

## Internships

Research assistant (Paid) – Automatic Control & Systems Engineering (ACSE) – [Summer 2019-Ongoing](#)

Project: Using electroencephalogram to identify Biomarkers for cancer survivor suffering fatigue.

My contribution:

- **Delivered a literature review.**
- **Wrote reports with support research evidence from other research papers.**
- **Developed test protocols and debugged the system.**
- **Presented research outcomes to patients & member of the public.**
- **Communicated with wide external stakeholders & collected feedback from them.**

Research assistant (Volunteering) – ACSE – Summer 2019

Project: Reducing the calibration time of the brain-computer interface.

- Used MATLAB for coding.
- **Achievement: Offered a paid research assistant job mentioned above.**

Technician at University of Sheffield ACSE Department (Volunteering) – [Summer 2019](#)

- Made circuit boards – Tasks include using schematic diagrams & soldering.
- **Support the technician team deliver high quality and innovative solutions.**
- **Possess a basic understanding of the manufacturing process by working on building PLCs.**

## Laboratory Tools

- Spectrophotometer
- Cryostat
- Micropipettes
- Absorbance Plate reader
- Microscopy
- Solaris Bioreactor
- Motorized Pipettes

## Leadership and project management

Sheffield Engineering Leadership Academy (**Only 3% are selected from a pool of 1200 student**) – [2019-2021](#)

Project: Organise & deliver a public engagement activity.

- **Reinforced problem-solving, team working skills & brainstorming techniques.**
- **Provided timely & accurate reporting on project activity.**
- **Contributed to set the strategic plan and identified goals, scope and resource limitations.**

- Developed leadership skills & filled the engineer's soft skills gap by attending workshops.

Project leader for Helping Hand (Homeless Outreach Project) – 2019

- Volunteered to be a project leader with the University Student Union due to Enthusiasm for helping people.
- Signposted Homeless people to local charities.
- Organised events for fundraising & Maintained good relationship with charities.

## Key achievements

- Attained a first grade at my first year at the University of Sheffield.
- Awarded Merit Scholarship from the University of Sheffield (Only 10 offered).
- My work as a research assistant led to a research proposal between the University and NHS's cancer clinic.
- Granted Best Communication Solution in a weeklong Engineering Challenge at the University of Sheffield.
- Faculty Undergraduate Scholarship for Academic Achievement.
- Granted Most professional Team behaviour in a weeklong Challenge by industrial partners.

## Project

Mechatronics: "Building an autonomous robot which can pass the required medical tool to doctor".

- Completely designed, developed and assembled the robot arm by myself.
- Wrote the code for the robot using Arduino.
- Collaborated with the team to implement Image processing Using OpenCV.

Synthetic Blood: "Producing a poster to illustrate the possibility of making a synthetic blood".

- Researched the topic and read lots of journal papers.
- Developed my presentation, poster designs and research skills.
- Worked as a part of a team to deliver the poster on time.

## Part-Time Job

Math & Physics Teacher Assistant at Study Global– 2020

- Worked at the University of Sheffield International College.
- Guide students to improve their Understanding
- **Feedback the Student's learning.**

Science & Engineering Champion– 2019-2021

- Inspiring the next generation of scientist & engineers.
- **Representing the University in Fairs & Exhibitions.**

## Skills

Software Skills:

- |              |          |                    |            |            |
|--------------|----------|--------------------|------------|------------|
| • SOLIDWORKS | • MATLAB | • Google Apps      | • InDesign | • OpenVibe |
| • Fusion360  | • PYTHON | • Microsoft Office | • OpenCV   | • Arduino  |

Soft Skills:

- |                            |                          |                        |                               |
|----------------------------|--------------------------|------------------------|-------------------------------|
| • <b>Good team player</b>  | • <b>Time management</b> | • <b>Communication</b> | • <b>Problem-solving</b>      |
| • <b>Laboratory skills</b> | • <b>Enthusiasm</b>      | • <b>Creativity</b>    | • <b>Attention to details</b> |

Languages:

Arabic	English	Spanish (learning)	German
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## Hobbies

I love to play sports, particularly football and table tennis. I find it a great stress relief and way of re-energising myself. I also enjoy reading psychology however most of my spare time I spent programming my own game and preparing myself to enter the next world memory champion competition.

## Referees

Dr Mahnaz Arvaneh  
Lecture and supervisor of my research internships  
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