

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 develop and enhance my designing, engineering and research skills. I am a very ambitious, inquisitive and analytical thinker and an excellent team player.

Education

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

Key Skills:

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

Relevant Modules:

Electric and Electronics (83%)	Programming & Problem Solving (66%)	Modelling analysis (86%)
Medical Imaging & Technology (70%)	Tissue structure and functions (72%)	Mechatronics (ongoing)

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.**

Project

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

- **Completely designed, developed and assembled a 5 degree of freedom robot arm.**
- 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.**

Laboratory Tools

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

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.

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
- Fusion360
- MATLAB
- PYTHON
- Google Apps
- Microsoft Office
- InDesign
- Ansys
- OpenVibe
- Arduino

Soft Skills:

- Good team player
- Laboratory skills
- Time management
- Enthusiasm
- Communication
- Creativity
- Problem-solving
- Attention to details

Languages:

Arabic

English

Spanish (learning)

German

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 having fun trying to improve my programming skills and computer vision.

Referees

Dr Mahnaz Arvaneh
Lecture and supervisor of my research internships
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