MARTA MASRAMON

BIOMEDICAL ENGINEERING – COMPUTATIONAL STREAM (UNDERGRADUATE)

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EDUCATION

MEng Biomedical Engineering (Computational Stream) – Imperial College London
September 2018 – Present

4th year
- Relevant modules: Reinforcement Learning, Adaptive Signal Processing and Machine Intelligence, Brain-Machine Interface, Non-Ionising Functional and Tissue Imaging
- MEng project: Analysis of hyperspectral oncological images. Application of CNNs to characterise the differences in the Raman spectra between healthy and cancerous cells. Study of the impact of pre-processing methods to reduce noise in the data.

3rd year – 1st class (77% grade average)
- Relevant modules: AI, Programming, Graphics, Image Processing, Digital Biosignal Processing
- Programming project (Java): analysis of islets of Langerhans in the eye
- Group project: Detection of Soil Borne Mycotoxins through a Near Field Communication (NFC) Powered Lateral Flow Assay (LFA) based Biosensor. I was responsible for creating a website (using React) connected to an online database (MongoDB).

2nd year – 1st class (81% grade average)
- Relevant modules: Programming, Signals and Control, Manufacturing Technology
- Programming projects (C++): gene code analysis, PNG decompression and manipulation
- Year project: creation of an electronic mathematical brailler with calculator and typewriting functionalities and tactile graph display. I focused on programming the Arduino controller.

1st year – 1st class (83% grade average)

International Baccalaureate – Aula Escola Europea   **September 2016 – June 2018**
- Final score of 39/45
- Relevant subjects: Mathematics HL, Physics HL, Chemistry SL (7/7 marks for all)
- Extended essay: designing a mechanical guitar tuner and creating an associated app for Android (coded with Java on XCode)

Spanish Baccalaureate – Aula Escola Europea   **September 2016 – June 2018**
- Took the Spanish Baccalaureate (LOE) in parallel to the IB
- Final score of 12.74/14 in Selectividad - Physics and Mathematics as the electives.

EXPERIENCE

Internship at Coroflo   **June – September 2021**

Coroflo is a medical device company that is developing a nipple shield with inbuilt flow measurement to track feeding volumes. The results are then displayed on an app, allowing breastfeeding mothers to learn about their child's feeding patterns. My role in this internship was to calibrate device sensors and optimize their burn-in period. I created a website and used an online database to store measurements.

CORE SKILLS

- Coding: C, C++, Python, Matlab, Prolog, Java, Javascript, Node, Express, React, HTML, CSS
- Software: OrCAD, Solidworks, Arduino, PSpice, Xcode, Intel Quartus Prime
- Soldering and wet lab skills
- Languages: fluent in English, Spanish and Catalan; basic knowledge of Italian and French

LEADERSHIP & VOLUNTEERING

Club president – Imperial College London   **September 2020- Present**

I am currently president of the Muay Thai society. Working during COVID-19, I have adapted the club's activity to adhere to the new regulations. I have learnt to converse with gyms, coaches, other societies and the university's Union, managing to organize the smooth running of the society and learning to delegate tasks to the rest of the committee.

Events Chair – Imperial College London   **September 2019- June 2020**

I was Social Secretary for two societies: Muay Thai and Project Nepal. I oversaw the organization of events and worked alongside the rest of the committee to take care of other issues within the societies.

Project Nepal – Volunteering   **Summer 2019**

I went to Nepal to volunteer in a school. I stayed in a remote village for four weeks to help teach English to young children. I also took an Outdoors First Aid training course before the trip.

CERTIFICATIONS AND AWARDS

- Bloomberg's Code for Good Prize at Hackathon organized by WSET Imperial (2021)
- Dean's List – 3rd year MEng Biomedical Engineering (2021)
- Dean's List – 2nd year MEng Biomedical Engineering (2020)
- Dean's List – 1st year MEng Biomedical Engineering (2019)
- The Complete 2020 Web Development Bootcamp – Udemy (2020)
- Scholarship CiMs-Cellex for the study of two baccalaureates (IB and LOE)
- Math competitions (1st place): Proves Cangur (individual, 2016), Copa Cangur (group, 2016)
- Cambridge Certificate of Proficiency in English (grade A, 2014)
- Outdoor First Aid (2019)