Riccardo El Hassanin

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EDUCATION

Imperial College London **London, UK**

MEng Electrical and Electronic Engineering *2019 – 2023*

- On track for First-Class Honours | Current Classification 2:1
- Relevant Modules: Mathematics, Machine Learning, Deep Learning, Artificial Intelligence, Advanced Signal Processing, Embedded Systems, Analogue and Digital Circuits, Communication Systems
- Successfully completed various individual laboratory projects including designing integrated amplifier circuits and programming FPGAs.

Gems World Academy Dubai **Dubai, UAE**

International Baccalaureate (IB) Diploma *2015 – 2019*

- Total Score: 43/45 | Higher Level Subjects: Mathematics (7/7), Physics (7/7), Business Management (7/7).
- Salutatorian Award (2019) and Honours Roll Awards (2015-2019) for outstanding academic performances.

RELEVANT PROJECTS

Smart Sound Recognition Device

Embedded Systems Project *January 2022 – March 2022*

- Worked in a team of 4 to develop a smart sound recognition device that classifies high pitch noises in a house environment and sends notification to the end user through an app when doorbell and fire alarm sounds are detected.
- Developed a deeper understanding of deep learning by employing a convolutional neural network to constantly classify sounds from spectrograms of the input signals.

Mars Rover Project

Second Year Electronics Project *May 2021 – June 2021*

- Strengthened analytical and problem-solving skills through the design and programming of an autonomous Mars Rover prototype using Arduino, able to work remotely without supervision and with the ability to map and store data of its travelled path.
- Built strong team-working and collaboration skills by leading a team of 6 throughout the development process.

WORK EXPERIENCE

Undergraduate Research Opportunity Program (UROP) *8 weeks Summer 2021*

- Undertook a research experience, on a remote basis, supervised by Professor Tom Pike on NASA's Mars InSight Mission.
- Enhanced analytical skills by processing data returned from InSight to disentangle the seismic signals from Mars' background interferences in order to obtain insights on potential patterns.
- Strengthened coding skills by creating multiple programs in MATLAB to carry out PCA analyses and composing a Mars time converter for the purpose of mapping processed data.

Tutoring IB students: HL Math and HL Physics *Aug. 2020 – Dec. 2020*

- Acquired a strong sense of organization and time-management skills by successfully balancing teaching and multiple university deadlines.
- Improved verbal communication skills to convey mathematical knowledge to younger minds.

TECHNICAL SKILLS

- Proficient in Microsoft Office applications.
- Experienced in Python (NumPy, Pandas, Keras, TensorFlow), C++, Arduino, Prolog, MATLAB, Simulink, Verilog HDL, Quartus Prime, Linux, CAD design.
- Hardware skills – Raspberry Pi, FPGA, integrated analogue circuits design, Soldering, 3D and Laser Printing
- Languages – Italian: native | English: fluent | Spanish: intermediate level.