



Lucia Giuffrida



EDUCATION

MSc in Biomedical Engineering: Biomedical Technologies for Electronics
Politecnico di Milano, 10/2024

Master Thesis: *Development of an Electronic Nose for Diagnostic Purposes.* The device detects VOCs present in exhaled breath and uses machine learning algorithms to classify the etiology of pneumonia at an early stage. The project, developed at the TechRes Lab in collaboration with the ASST Papa Giovanni XXIII Hospital in Bergamo, involved studying and selecting the appropriate sensors, designing the optimal front-end, and developing control and management firmware to create a fully integrated embedded device for early pneumonia etiology classification.

Final Grade: 110

Bachelor's Degree in Biomedical Engineering
Politecnico di Milano, 09/2021

Thesis: "Methodological analysis of work-related musculoskeletal disorders using OpenSim: load lifting routines"



DEVELOPED PROJECTS

Development of a **Serious Game** using **Unity** software aimed at raising awareness about climate change

Development of a **wearable device for the acquisition, analysis, and visualization of an ECG signal** through electrodes on a graphical interface.



LANGUAGE CERTIFICATIONS

PET (PRELIMINARY ENGLISH TEST)
TOEIC (Test of English for International Communication) Certification



PUBLICATIONS

Lotesoriere, B. J., Robbiani, S., Tischer, A. M., Corrà, L., Zanni, E., Gianfranceschi, A., Giuffrida, L., Capelli, L., & Dellacà, R. (2024). **Preliminary Study on the Poisoning Effect of Different Materials on MOX Sensors.** EUROSENSORS2024



INTERNATIONAL STUDY TRIPS

Language exchange programs in London and Edinburgh.



LANGUAGES

Italiano: madrelingua
Inglese: B2

CONTACTS



Commessaggio



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16/02/1999

PERSONAL PROFILE

Biomedical engineer with a specialization in **electronic technologies**. Expertise in **electronic design and testing**, as well as firmware programming for **embedded systems**. Advanced **programming skills** and experience in **machine learning** applications.

Excellent ability to work in teams, problem-solving skills, ability to speak in public, complete tasks even in short periods, and work under pressure

SKILLS AND KNOWLEDGE AREAS

- **Software and Tools:** STM32Cube, C/C++, MATLAB, EAGLE, KiCad, LabVIEW, Unity, GitHub, Python, PSoC Creator, SolidWorks
- **Relevant Topics:** Electronic Design for Biomedical Instrumentation, Machine Learning, Sensor Systems, Laboratory of Electronic Technologies and Biosensors, Embedded System Programming, Biomedical Electronics, Advanced Signals and Data Processing, Statistics, Advanced Programming, Medical Informatics, Radiation Protection