

Célian DI GIOVANNI



Informations

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Skills

Python	● ● ● ● ●
AI & Data Science: Classification, Deep Learning (CNN), Feature Engineering, Embedded AI	● ● ● ● ●
Signal Processing: ECG, FFT, Bio-impedance	● ● ● ● ●
Computer Vision: segmentation, thresholding d'Otsu, Sobel, Mathematical Morphology	● ● ● ● ●
Biostatistics	● ● ● ● ●
Neurosciences	● ● ● ● ●

Profile

Final Year Engineering Student (M.Sc. Level) specializing in Artificial Intelligence and Signal Processing. Experienced in **physiological signal analysis, feature extraction**, training and evaluation of **Machine Learning** models (Random Forest, SVM) on real data. Applied projects include **biometric classification, ECG signal analysis**, and **deployment of embedded AI models**.

Education

Digital and Electronic Engineering (M.Sc.) – e-Health Option	2023 - Present
ISEN Méditerranée, Toulon	
Bionics Engineering – Erasmus Semester	Sep 2024 - Feb 2025
Università di Pisa	
CPGE PCSI / PC	2021 - 2022
Lycée International de Valbonne	
Baccalauréat Mathématiques & Physique Chimie - Mention Bien	2021
Institution du Mont Saint-Jean, Antibes	

Projects

Embedded AI for Epileptic Patient Monitoring	Present
STMicroelectronics Hackathon – Ongoing Project	
<ul style="list-style-type: none">Analyzed ECG signals from the PhysioNet database (CHB-MIT).Calculated Heart Rate Variability (HRV) indicators: RMSD, SDNN, LF/HF.Trained Tensor Flow Lite AI models on Edge Impulse for conversion and compression for execution on STM32 target.Explored results show detection of ECG alterations consistent with documented epileptic seizure signatures.Results non statistically validated yet.	
Skin Maven Bandage Biometric Classification (M1 Project)	2025
<ul style="list-style-type: none">Created the database from skin bio-impedance measurements of 83 volunteers.Performed Data Augmentation using SMOTE and randomization.Trained and compared multiple models: Logistic Regression, Random Forest, Gaussian, KNN, SVC.Achieved 90%, 60%, 20% accuracy, for respectively sex, age, skin tone classification using Random Forest.	
Segmentation of Regions of Interest on Radiographic Images	2025
<ul style="list-style-type: none">Full implementation in Python and Octave.Methods used: Otsu's thresholding, RGB, grayscale, erosion, and dilation.Result: Functional segmentation validated on brain and thorax radiographs.	



Languages

English (B2 Cambridge)



Spanish



Hobbies

■ Trips, History and Culture

■ Accoustic, Electronic Guitar

■ Rock Music, Cinema

■ Paddle, Judo, Badminton, Running

■ Volunteering: Maraude Ordre de Malte

Employment

QA & Clinical Data Engineering Internship

Jun 2025 - Sep 2025

Pôle Pharmacie CHU de Nice

- **System Validation (QA):** Performed **functional validation** of a mobile medical follow-up application (MUSE project).
- Defined use cases and **test scenarios**, and provided reports to development teams.
- Acted as the interface between medical teams and developers.
- **Data Structuring:** Extracted and structured clinical data from DOCX/XLSX reports.
- Automated data centralization using **Python (openpyxl, python-docx)** for subsequent analysis in Excel / Power Query.

Certificates

First Aid Certificate level 1