

Leonardo Rizzeri

Bioengineering for Neuroscience MSc Student | BCI,
Neuroimaging & Neural Signal Analysis

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PROFILE

Leonardo Rizzeri, currently pursuing an MSc in Bioengineering for Neuroscience at the University of Padua, holds a BSc in Electronic Engineering and IoT with honors from the University of Trieste. Targeting a career in brain-computer interfaces, I excel in quick learning and grasping complex concepts. My skills include strong analytical and deductive reasoning, complemented by a collaborative approach honed through team sports. I am committed to maximizing my contribution to projects through dedication, curiosity, and a strong desire to learn.

EDUCATION

MSc in Bioengineering for Neuroscience

University of Padua

Present

Currently enrolled

BSc in Electronic Engineering and IoT

University of Trieste

07/2025

Final grade: 110/110 cum laude

Scientific High School Diploma — Applied Sciences Track

Liceo Scientifico G. Oberdan

06/2022

Final grade: 99/100

PROJECTS

fNIRS/DOT Image Reconstruction

07/2026

Preprocessed fNIRS data and performed GLM-based activation estimation and diffuse optical tomography reconstruction using MATLAB/HOMER2.

FDG-PET Glucose Metabolism Quantification

05/2026

Computation of SUVR maps and investigation of the relationship between regional glucose metabolism and functional connectivity metrics with MATLAB, FSL and BASH

Biomedical Machine Learning in R

02/2026 – 04/2026

Classification and regression models on biomedical datasets using LDA, QDA, Random Forest, SVM and calibration analysis.

EEG ERP Analysis — Empathy-Related Face Processing

07/2026

Preprocessed 64-channel EEG data in EEGLAB and computed condition-specific ERPs after filtering, re-referencing, bad channel interpolation, artifact rejection and epoching.

Metamaterial-Integrated Wireless Power Transfer System for Scalp-Implantable IoMT Devices

05/2025

I investigated the use of metamaterials to improve the efficiency of near-field wireless power transfer systems for recharging scalp-implantable medical devices in Internet of Medical Things (IoMT) applications.



TECHNICAL SKILLS

Programming & Data Analysis

MATLAB, R, Bash, C++, LaTeX, Java, Python

Neuroimaging & Biomedical Tools

FSL, Homer2, Monolix, BrainSpace

Web & Software Tools

WordPress, HTML, CSS, GitHub, Visual Studio, Overleaf

Electronics & Simulation

PSpice, ModelSim, Verilog, Assembly



LANGUAGES

Italian (Native speaker) | **English** (C1) |

Spanish (B1)



WORK EXPERIENCE

BeeToo Agency

Web Developer

2023 – 2026

Worked on the development and maintenance of websites, mainly using WordPress and web technologies. This experience allowed me to improve my technical skills, attention to detail and ability to understand client needs.

Interclub Muggia

Basketball Coach

2021 – 2022

Coached basketball activities, developing communication, leadership and teamwork skills.



RELEVANT COURSEWORK

Neuroengineering & Neuroscience

Neurophysiology, Neural Computation and Neurotechnologies; Bioengineering for Cognitive Neuroscience; Bioengineering for Neurorehabilitation.

Neuroimaging & Biomedical Signals

Imaging for Neuroscience; Biomedical Signal Processing; Biomedical Imaging.

Machine Learning & Computational Methods

Machine Learning and Data Science for Bioengineering; Deep Learning Applied to Neuroscience and Rehabilitation; Statistical Methods for Bioengineering.

Robotics & Assistive Technologies

Neurorobotics; Medical Robotics.



WHY I WANT TO WORK IN THIS FIELD

My interest in brain-computer interfaces started when I was very young, inspired by the idea of immersive virtual worlds and direct interaction between the brain and technology. Over time, this fascination evolved into a broader scientific interest in neural interfaces, human enhancement and rehabilitation. I am particularly motivated by the possibility of developing technologies that can improve the way humans interact with the external world, assist people with neurological or motor impairments and expand the boundaries of human-machine interaction.