MICHELE DI LUCCHIO

Bioengineer

SUMMARY

Biomedical Engineer determined and inclined towards hard work. Great passion for programming and controlling electronic devices, with experience in the field. Enthusiastic about robotics, machine learning and their application to improve the people's quality of life. Additionally, I posses skills in data analysis for model creation and simulation in software environments. Experience in teamwork in professional settings.

EDUCATION

MSc Bioengineering 2021-2024
Università di Genova - score 110/110 with honors

BSc Biomedical Engineering 2015-2021
Università di Pisa - score 110/110

LANGUAGES

Italian - native language
English - B2 Cambridge certificate

SKILLS

Arduino - Esp32 - HTC VIVE - Leap Motion - Node-Red - Simulink - MyoBock sensors - Mini Wave sensors - IMU sensors - MATLAB - C# - C - JavaScript

EXPERIENCE

Research Fellow - Istituto Italiano di Tecnologia, Genova 04/2024 - present
Research activity in Spoke 1 and 2 within the RAISE project 'Robotics and AI for Socio-economic Empowerment'. Software development for the Computer Assistant Laser Microsurgery project.
Skills: **CCS**, **Halcogen**, **Arduino**, **Texas Instrument MCU**

Internship - Istituto Italiano di Tecnologia, Genova 09/2023 - 03/2024
Master thesis in collaboration with the Rehabilitation Laboratory. Integration of the HyperLeg project aimed at developing a preliminary myoelectric control for bionic ankle prostheses.
Skills: **Armonico bionic ankle prosthesis, MyoBock sensors, Mini Wave sensors, MATLAB, C**

Seminar Instructor - Università di Genova 2022 - 2023
Part-time contract with the UnigeSenior division for informative talks about neuroscience and rehabilitation technologies.

Academic Tutor - Università di Genova 2022 - 2023
Contract for 50 hours as an educational tutor for freshmen in the biomedical engineering degree program.
Skills: **C++**

Private Tutor 2021 - present
Private tutor in scientific subjects for high school students.

MAIN TOPICS AND PROJECTS

Data Analysis of biomedical data and signals - Master's degree program
Knowledge of machine learning techniques for analyzing and modelling data relevant to the fields of medicine and biology.
Project work: Real-time study of EMG signals for force estimation in a dynamic task.
Skills: **MATLAB, Simulink, Cometa sensors**

Biomedical Robotics - Master's degree program
Study of the hardware and software components of biomedical robots.
Project work: Creating a state machine to control the Geomagic Touch manipulator robot.
Skills: **Simulink, MATLAB, Geomagic Touch**

Software Technologies for HMI - Master's degree program
Study of computer vision algorithms for tracking in virtual reality and augmented reality environments.
Project work: Development of medical simulation in virtual reality scenario. In collaboration with Centro di Simulazione Avanzata (SIMAV), Genova.
Skills: **HTC VIVE, LeapMotion, Unity, C#**

Wearable Devices & IoT - Master's degree program
Designing and developing wearable devices for biomedical applications, along with microcontroller programming.
Project work: Designing the hardware, software, and IoT protocol for a wearable device aimed at detecting falls, suitable for both everyday use and sports activities.
Skills**: Esp32, Arduino IDE, C, JavaScript, NodeRed, IMU sensors**

VOLUNTEERING

Teacher Assistant - Neuroengineering Summer School, Genova
International fair focused on neuroscience where I participated as a teaching assistant for the use of the Geomagic Touch robotic manipulator in the SOFA environment.

Judge for the First Lego League - Scuola di Robotica, Genova
I participated as a judge in the First Lego League national competition for participants under 16. My role involved evaluating the design strategies and operational capabilities of the robots created by the competing teams.

I authorize the processing of personal data contained in my CV for recruitment and selection purposes, in accordance with EU Regulation No. 2016/679 (GDPR) and Legislative Decree No. 196/2003 and subsequent amendments.

Updated CV as of May 28, 2024.