LAURA ROMEO
AUTOMATION ENGINEER
PH.D. IN SMART AND SUSTAINABLE INDUSTRY

📍 Bari, Italy

✉ lauraromeo1994@gmail.com

🚗 Driver license (B)

📅 Born in 03/05/1994

🌐 lauraromeo.com

Dedicated and ambitious, my aptitude to deepen everything I'm passionate about led me to be involved in various projects concerning computer vision, artificial intelligence, and robotics. I manage to identify problems and propose solutions, communicating effectively and clearly. I've successfully passed the exam to become a member of **MENSA**, a society that includes the 2% of the world population with the highest IQ. I've also published and presented several scientific works at various **international conferences** and **journals**, which allowed me to network and interact in multicultural contexts.

TECHNICAL SKILLS

- Machine Learning (CNN, LSTM, SVM, ...)
- Computer Vision (OpenCV, PyTorch, TensorFlow, FastAI)
- Programming (Python, Matlab, C, C++)
- Robotics (ROS)
- PLC
- Internet of Things
- Microsoft Office (Word, PowerPoint, Excel, ...)

LANGUAGE SKILLS

- Italian (native)
- English (IELTS - C1)
- Spanish (B1)
- Portuguese (B1)

EXPERIENCE

Researcher
Institute STIIMA (Industrial Intelligent System and Technologies for Advanced Manufacturing), CNR (National Research Council), Bari, Italy
DEC. 2023 - *in progress*

Analysis of vision systems for image segmentation and for monitoring the interactions of humans with environments, machines, and artificial intelligence systems.

- Implementation of machine learning and deep learning algorithms to realize autonomous systems capable of performing predictions, classifications, and diagnostics.
- Definition of RGB-D tools for natural image acquisition, focusing the study on semantic segmentation of various types of grapes in vineyards by integrating RGB and Depth information.

Contract Professor
Polytechnic of Bari, Italy
SEP. 2024 - *in progress*

- Professor for the course Informatics for Engineering (6 ECTS). Boolean algebra, Algorithms and Flowcharts, Programming languages, MatLab environments, Software infrastructures.

Research Fellow
Institute STIIMA (Industrial Intelligent System and Technologies for Advanced Manufacturing), CNR (National Research Council), Bari, Italy
OCT. 2019 - DEC. 2023

Research fellowship involving development of computer vision systems and integration of machine learning models.

- Development of deep learning models for diagnostics, predictive, and prescriptive analysis.
- Application of artificial intelligence systems for gait analysis and behavior of patients with neurodegenerative diseases.

Visiting Researcher (Computer Vision Group)
Bonn Universität, Germany
MAR. 2022 - SET. 2022

- Development and implementation of deep learning methods (Pytorch, Tensorflow) applied to human action recognition and segmentation.

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SOFT SKILLS

- Adaptability
- Problem-solving
- Teamwork
- Time management
- Interpersonal skills

HOBBY & INTERESTS

- Travelling
- Reading
- Movies and TV Series
- Videogames
- Live action role-playing (LARP)
- Member of MENSA Society

University Tutorship

Polytechnic of Bari, Italy
SEP. 2021 - FEB. 2022

- Teaching support activities for the course Fundamentals of Electronic Devices (Bachelor of Science in Electronic Engineering).

MAR 2021 - JUL. 2021

- Teaching support activities for the course Advanced Electronic Devices (Bachelor of Science in Electronic Engineering).

Internship (Master Thesis)

Institute STIIMA (Industrial Intelligent System and Technologies for Advanced Manufacturing), CNR (National Research Council), Bari, Italy
MAR. 2019 - JUL. 2019

- A mobile robot was used to look for the best deploying position for the IoT sensors in outdoor contexts. The robot has been configured using Robot Operating System (ROS), and the outdoor localization has been estimated using an Extended Kalman filter, merging odometry, inertial and GPS measurements.

EDUCATION

Ph.D. in Smart and Sustainable Industry

Polytechnic of Bari, Italy
SEP. 2020 - OCT. 2023

- Vision devices and systems for monitoring the wellbeing of operators in a workspace shared with collaborative robots in Industry 4.0.

Master's Degree in Automation Engineering

110/110 WITH HONORS
Polytechnic of Bari, Italy
OCT. 2017 - JUL. 2019

Kinematics, dynamics, and control of robotic systems; electric drives; LabView, Melfa Basic, and PLCs implementations.

- Thesis: "Design and experimentation of a robotic system for the automatic installation of an Internet of Things network in outdoor scenarios", developed during the internship at the STIIMA Institute.

Bachelor's Degree in Computer Science and Automation Engineering

Polytechnic of Bari, Italy
SEP. 2013 - OCT. 2017

- Thesis: Calibration of domestic gas meters based on the thermal-mass measurement principle.