

# Giuseppe MURRO

## Machine Learning Engineer

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**↗** <https://gmurro.github.io/>  
**i** 23 march 1998 (24 years old) in Acquaviva delle Fonti, Bari



I'm highly interested in all new technologies with a particular attraction toward the innovative applications in the Artificial Intelligence field, namely Deep Learning, so I would like to work in this area. My working ambition is about learning as much as possible from the company that believes in me, with the hope of covering increasingly important roles that give me responsibility and visibility.

## 💼 PROFESSIONAL EXPERIENCE

September 2020 December 2020	<b>Technical/scientific consultant, CILAB, UNIVERSITY OF BARI "ALDO MORO", Italy</b> <i>Departement of Computer Science - OCCASIONAL SELF-EMPLOYMENT CONTRACT</i> Development and integration of software modules for the RPASInAir research project co-funded by the European Union, under the supervision of the CILab laboratory. ➢ Extension of the work done during the Bachelor's thesis ➢ Integration between C++ and python software modules ➢ Inter-process communication management in a publish/subscribe framework using NNG library ➢ Build automation using CMake ➢ Crowd detection methods for drone safe landing using pre-trained DNN models
September 2019 November 2019	<b>Clerk, STUDENT ADMINISTRATION OFFICE, UNIVERSITY OF BARI "ALDO MORO", Italy</b> <i>Department of Agricultural Science - SELECTED FOR STUDENT COLLABORATION ACTIVITIES</i> I have been selected to make 150 hours of collaboration at the University structures satisfying the merit requirements of the call. ➢ Assistant for enrolments, changes and transfers, degree, diploma supplements ➢ Documents organization

## 🎓 EDUCATION

September 2020 Present	<b>Alma Mater Studiorum - University of Bologna, BOLOGNA, Italy</b> <i>Master's degree - LM-32 ARTIFICIAL INTELLIGENCE</i> The programme address specialized topics like Machine Learning, Automated Reasoning, Computer Vision, Natural Language Processing, Optimization Courses are fully taught in English Current GPA : 4.0/4.0 - 3 exams left
August 2021 February 2022	<b>Vrije Universiteit Amsterdam, AMSTERDAM, Netherlands</b> <i>Erasmus+ Mobility for Studies - ARTIFICIAL INTELLIGENCE</i> Main research topics : Reinforcement Learning and Evolutionary Computing. Continuous exposure to expats leading to significant improvement of my English level The experience meant a great increase in my soft skills: adaptability to change, problem solving, open-mindedness.
September 2017 July 2020	<b>University of Bari "Aldo Moro", BARI, Italy</b> <i>Bachelor's Degreee - L-31 COMPUTER SCIENCE AND TECHNOLOGIES FOR SOFTWARE PRODUCTION</i> Mainly focused on the techniques of software engineering Thesis title : <i>"Design, development and integration of a crowd detection software module in a remotely piloted system"</i> Final grade : 110/110 cum laude - GPA of 3.85/4.00 over the 3 years

## OTHER COURSES

February 2022	<b>AlmaEnglish B2 - University of Bologna, BOLOGNA, Italy</b>
June 2022	AlmaEnglish project offers the opportunity to improve English language skills and obtain the international language certification IELTS Academic. <ul style="list-style-type: none"><li>&gt; Selected after a placement test</li><li>&gt; 40 hours of face-to-face teaching + 10 hours of e-learning support</li></ul>
March 2019	<b>CyberChallenge.IT 2019, BARI, Italy</b>
June 2019	<a href="https://cyberchallenge.it/halloffame/2019">https://cyberchallenge.it/halloffame/2019</a> in cybersecurity for undergraduate students organized by CINI. Former member of the University of Bari "Aldo Moro" team. <ul style="list-style-type: none"><li>&gt; Selected from 20 out of an initial 360 candidates for the course</li><li>&gt; Studying network security principles, possible attacks and countermeasures to counter them learned</li><li>&gt; Practice in CTF hacking competitions using Kali Linux</li></ul>

## TECHNICAL SKILLS

Programming    Python Java, Scala, Prolog, MiniZinc, C  
Libraries    NumPy, Pandas, Scikit-learn, TensorFlow, Matplotlib, OpenCV  
Technologies    Git, Docker, Kubernetes, Spark, Linux, Google Cloud

## LANGUES

English (B2)      
Italian (Native)    

## PROJETS

### MOUNTAIN SCOOTER PROBLEM

FEBRUARY 2022

 [github.com/gmурро/MountainScooterProblem](https://github.com/gmурро/MountainScooterProblem)  Report

Addressing the *Mountain Car problem*, a classic reinforcement learning problem, using 2 different approach : Hybrid Nelder-Mead Particle Swarm Optimization through neuroevolution and Q-Learning algorithm.

 Python  OpenAI Gym  Numpy  Optimization  Reinforcement Learning

### EVOLUTIONARY EVO MAN PLAYER

SEPTEMBER 2021

 [github.com/gmурро/EvolutionaryEvoManPlayer](https://github.com/gmурро/EvolutionaryEvoManPlayer)  Report

Implementation of two *Evolutionary Algorithms* to teach a player how to fight against an enemy that shoots, jumps and moves using a python framework called EvoMan.

 Python  NEAT  EvoMan  Neuroevolution

### VERY LARGE SCALE INTEGRATION

JULY 2021

 [github.com/gmурро/VLSI](https://github.com/gmурро/VLSI)  Report

Implementation of different solution in CP, SAT and SMT to solve a Constraint Optimization Problem about VLSI (Very Large Scale Integration) in order to optimize the placement of electrical circuits on a plate.

 Python  MiniZinc  Constraint Programming

### FOOD RECOGNITION

MARCH 2021 - JUNE 2021

 [github.com/gmурро/FoodRecognition](https://github.com/gmурро/FoodRecognition)  Report

The Food Recognition challenge is a competition hosted by Alcrowd. Implementation of *Deep Learning* techniques to train **segmentation models** which can detect the individual food items from images.

 Python  TensorFlow  UNet  Segmentation

### TABLUT AI PLAYER

NOVEMBER 2020

 [github.com/gmурро/Tablut](https://github.com/gmурро/Tablut)  Slides

Java-based intelligent agent able to play the ancient board game Tablut using MinMax algorithm. Winner of Tablut Students Challenge 2020 of the Fundamentals of Artificial Intelligence course held at the University of Bologna

 Java  Game Theory  MinMax  Tree search