

# Giovanni Minelli

ML ENGINEER - COMPUTER SCIENTIST | BOLOGNA, ITALY

## INFO

### DRIVING LICENSE

B

### NATIONALITY

ITA

## SKILLS

Python ●●●●●

Dart ●●●●●

C / C++ / C# ●●●●○

Java / Kotlin ●●●●●

PHP ●●●●○

SQL ●●●●○

HTML5 / CSS3 / JS ●●●●○



<https://github.com/johnMinelli>



<https://stackoverflow.com/users/7769129/giovanni-minelli>

## CERTIFICATES

English Certificate FCE B2  
Cambridge English (08/20)

Certified Sophos Engineer  
and Cybersecurity

## MAIN FIELDS

Fundamentals of AI Languages and IT ML DL

Computer Vision Machine vision NLP RL

Math I & Physics I Statistics Computer networking

Algebra Prog Languages Operative Systems

Mobile apps Cybersecurity Web Technologies

Information theory



## PRESENTATION

Machine learning engineer and computer scientist with broad core competencies. Passionate about code and new technologies with a main interest in the research area of machine vision and visual understanding and learning, especially in robotic contexts.



## EDUCATION

University of Bologna, MSc in Artificial Intelligence 2020-2022 Final grade: 110L<sub>110</sub>

Thesis preparation abroad in the field of MARL at the "Autonomous Systems Research Group", UCL, London  
Title: "Decentralised coordination and communication in multi-agent reinforcement learning systems"

University of Bologna, BSc in Computer Science 2016-2019 Final Grade: 106<sub>110</sub>

Thesis in IoT field with practical demo and collaboration with sw dev working group of the Eclipse Foundation.  
Title: "Analytical approach to IoT infrastructure via open-source software"

High School Diploma in IT at ITIS O.Belluzzi, Bologna 2012-2016 Final Grade: 94<sub>100</sub>

Final exam project: Reconstruction of the school campus with Maya, a 3D modelling sw, and interaction with the simulated space using Unity game engine



## EXTRACURRICULAR

AI Online Program at Nankai University (07/21)

Certified training program to deepen topics of computer vision and medical robotics with experienced researchers in the fields. Held by the institute of Nankai University, Tianjin, China

AI Crowd Flatland challenge - RL (09/21)

Team participation in the Flatland challenge, which deals with a multi-agent coordination and navigation problem in a complex environment; addressed with reinforcement learning techniques



## RESEARCH AREA

Coordination in MARL (08/23)

Proposed a novel MARL approach for autonomous agents coordination. Agents communicate and make decisions using a combined model of self-interest and willingness to coordinate, enabling improved environmental interaction. AAAI 2024 submission.

Continual Learning - IMET '23 (06/23)

Analysis of continual learning effects on quadruped locomotion skills trained with common DRL techniques. Short paper "Towards Continual Reinforcement Learning for Quadruped Robots" accepted for publication in IMET 2023 conference.

SIDE+NVS - IROS '23 (05/22)

Single-image depth estimation unified with view synthesis task in a single self-supervised pipeline. Paper "Depth self-supervision for single image novel view synthesis" accepted for publication in IROS 2023 conference.



## PREVIOUS EMPLOYMENT

Intern reasearcher at **CYENS**

May 2023 -

- Research on advanced locomotion of quadruped robots from vision (RGBD)

Software developer at **MCStudio**

Apr 2020 - Mar 2021

- Development of software for commercial purposes for engineers and mechanical design firms
- Development of client and server application deployed in production using Azure cloud infrastructure; Technological stack: Windows authentication, IIS, WinForm and Wpf (C#), MSSQL

Contractor developer at **Maretech sas**

Jul 2018 - Mar 2020

- External collaborator in parallel with my studies, alternately in the roles of software developer, systems engineer, and service designer
- I have dealt with Cisco, Ubiquiti, and Sophos hw technologies; development of websites, .NET webapps, and APIs (C#, PHP)

Contractor at **MACNO srl**

Jan 2018 - Jan 2019

- Role of certified Autodesk technician for CAM software, as internal technical support

## Minor occupations

Mobile App Developer at VenturiAutospurghi: Flutter app (web/iOS/Android)

Aug 2019 - Dec 2019

Developer at Rimec: firmware and reader software for SmartCard

Feb 2018 - Apr 2018



## HIGHLIGHTED PROJECTS (more on GitHub)

CARLA Gym - November 2022

As part of my effort in contributing to Farama Foundation RL community I developed a third party PettingZoo multi-agent environment based on CARLA simulator for autonomous driving

SQLMiner - October 2019

Proof of concept. Cryptocurrency miner with Scrypt and SHA256d encryption algorithms and mining via SQL on BigQuery DB



## SOFT SKILLS

In my spare time, I attend gym and fitness classes. I have skills in manual works, and mental flexibility to use my knowledge in different fields. I have a result-oriented and problem-solving attitude and I am well predisposed to learning new things. I work well in collaborative environments.