

# Davide Domini

## Curriculum Vitae

Ravenna-Cesena

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## Education

- 2023–ongoing **PhD in Computer Engineering and Science - University of Bologna, Cesena.**
- 2021–2023 **Master Degree in Computer Engineering and Science - University of Bologna, Cesena.**  
Thesis: *Aggregate computing and many-agent reinforcement learning: towards a hybrid toolchain*  
Graduation grade: 110/110 Cum Laude
- 2018–2021 **Bachelor Degree in Computer Engineering and Science - University of Bologna, Cesena.**  
Thesis: *Classificazione di Radiografie Toraciche per la Diagnosi del COVID-19 con Reti Convolutionali e Vision Transformer*  
Graduation grade: 109/110
- 2013–2018 **Secondary High School Diploma - ITIS N. Baldini, Ravenna.**

## Scientific publications

- 2023 D. Domini, F. Cavallari, G. Aguzzi, and M. Viroli. Scarlib: A framework for cooperative many agent deep reinforcement learning in scala. In S.-S. Jongmans and A. Lopes, editors, *Coordination Models and Languages*, pages 52–70, Cham, 2023. Springer Nature Switzerland. DOI: 10.1007/978-3-031-35361-1\_3

## Teaching Experience

- 2023 **Teaching Tutor**, Department of Computer Science and Engineering - University of Bologna.  
Subject: Software Engineering & Software Engineering for Intelligent Distributed Systems
- 2023 **Teaching Tutor**, Department of Computer Science and Engineering - University of Bologna.  
Subject: Industry 4.0
- 2022 **Teaching Tutor**, Department of Computer Science and Engineering - University of Bologna.  
Subject: Laboratory of Big Data, Data Mining and Data Analytics

- 2022 **Teaching Tutor**, Department of Statistical Sciences "Paolo Fortunati" - University of Bologna.  
Subject: Machine Learning Systems for Data Science
- 2022 **Teaching Tutor**, Department of Statistical Sciences "Paolo Fortunati" - University of Bologna.  
Subject: Computer Science
- 2022 **Teaching Tutor**, Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi" - University of Bologna.  
Subject: Digital Design Principles and Computer Architecture
- 2022 **Substitute Teacher**, ITIS Nullo Baldini High School - Ravenna.  
Subject: Computer Science

## OpenSource Projects

- 2023 **ScaRLib**, [*scarlib*].  
A Scala Framework for Cooperative Many Agents Deep Reinforcement Learning  
*Scala, Python*
- 2022 **Racing Simulator**, [*pps-sim-race*].  
Simple F1 Race Simulator  
*Scala, Prolog*
- 2022 **FOOL**, [*FOOL*].  
A compiler for FOOL, a functional object-oriented programming language  
*Java, ANTLR4*
- 2021 **Covid-19 Classifier**, [*C19C*].  
My thesis. A deep neural network, with vision transformer, trained to discriminate covid-19 from viral pneumonia  
*Python*
- 2020 **Cubic World Simulator**, [*CWS*].  
Multi-threaded 3D game  
*Java*

## Scholarships

- 2023 **University of Bologna Scholarship**.  
Bando di concorso per l'assegnazione di incentivi agli iscritti a corsi di studio di area scientifico-tecnologica per l'anno accademico 2022/2023
- 2019 **University of Bologna Scholarship**.  
Bando di concorso per l'assegnazione di incentivi alle iscrizioni a corsi di studio inerenti ad aree disciplinari di particolare interesse nazionale per l'anno accademico 2018/2019

## Skills

- Programming Language Scala, Java, Kotlin, C, Python, Prolog, SQL, PHP, JavaScript, Matlab
- Technologies Git,  $\LaTeX$ , MEAN Stack, Gradle, Docker, Tensorflow, PyTorch, Colab, Jupyter Notebook
- Patterns & Practices Object Oriented Programming, Functional Programming, Concurrent & Distributed Programming, Machine Learning & Deep Learning Patterns

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## Languages

Italian Native Speaker  
English Fluent  
Spanish Basic

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## Certifications

- 2022 **EFSET English Certificate 75/100 (C2 Proficient).**  
ID: [ZnxRoS]  
EF SET Certificate
- 2022 **Technologies and platforms for Artificial Intelligence.**  
ID: [6418ba658b7440bb95ed097e2ee27c83]  
Politecnico di Milano
- 2022 **Introduction to Complexity.**  
ID: [2523594754]  
Santa Fe Institute
- 2022 **Understand Research Methods.**  
ID: [RTAMXFKQAGWA]  
University of London - Coursera

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## Work Experience

- 2021 **Deep Learning Internship**, *Computer Vision*, Department of Computer Science and Engineering - University of Bologna.  
**Task:** Research for the development of a solution for the recognition of abnormal walking with Deep Convolutional Neural Network
- 2018 **IT technician**, Sitem Impianti Srl.
- 2018 **Software developer**, Ecofeel.  
Website creation for the new startup  
Programming of sensors for environmental measurements
- 2017 **IT technician**, Spring Italia.
- 2016 **IT technician**, ACER Azienda Casa Emilia-Romagna.