



MATTEO MAGNINI

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IN SHORT

Research Fellow at Department of Computer Science and Engineering (DISI), University of Bologna. Main research activities comprehends the fields of Artificial Intelligence, First Order Logic, Knowledge Representation and Machine Learning.

EDUCATION

State Exam

Industrial and Information Engineer

June, 2021

University of Bologna, Italy

- Qualification for the profession of engineer.

Master's degree

Computer Science and Engineering

October, 2018 → March, 2021

University of Bologna, Italy

- Studies in the field of programming paradigms, computational models, distributed systems, robotics, machine learning, artificial vision, web applications, business intelligence, data mining, big data.
- 110/110 *cum laude*

Master's degree thesis

An information theory analysis of critical Boolean networks as control software for robots

March 26, 2021

Relator: Prof. Andrea Roli

- Identifying relationships between robots, controlled by critical random Boolean networks, successfully achieving the assigned task and defined information theory functions on sensors and actuators.
- External site: <https://amslaurea.unibo.it/23062>

Bachelor's degree

Computer Science and Engineering

September, 2015 → December, 2018

University of Bologna, Italy

- Studies in the field of programming languages, operating systems, software engineering, algorithms, networking and web.
- 110/110 *cum laude*

Bachelor's degree thesis

Ottimizzazione Combinatoria mediante Deep Reinforcement Learning: Sperimentazione nella Logistica di Magazzino.

December 14, 2018

Relator: Prof. Gianluca Moro

- Training and analysis of a neural network using Deep Reinforcement Learning to optimise the allocation of commodity in a warehouse with respect to picking frequency.
- External site: <https://amslaurea.unibo.it/17000>

High-school diploma

Scientific curriculum

2009 → 2014

Liceo Scientifico "A. Righi", Cesena (FC), Italy

- Final mark 100/100

EXPERIENCE

Teaching assistant for the course “Fondamenti di Informatica”

Feb., 2022 → Now

School of Engineering and Architecture

University of Bologna, Italy

- Computer architecture. Representation of Information. Algorithms and data structures. C programming language.
- Supervisor: Dr. Roberto Casadei
- Course Info: <https://apice.unibo.it/xwiki/bin/view/Courses/FINF2022>

Research Fellow

Oct., 2021 → Now

Department of Computer Science and Engineering (DISI)

University of Bologna, Italy

- Project title: “Strumenti di logica computazionale per estrazione e iniezione di conoscenza simbolica da e verso predittori subsimbolici”
- Goal: producing a software for the symbolic extraction/injection from/into sub-symbolic predictors
- Supervisor: Prof. Andrea Omicini

ETL product specialist

May 2021 → Oct., 2021

Healthcare division

Onit Group, Cesena, Italy

- Datawarehouse, database, web-services, customer care.
- Reference: Cecilia Zanella

Tutor DM

Feb., 2021 → March 2021

Educational services sector

University of Bologna

- Technical support for mixed teaching and lessons supervision for Covid-19 prevention.

Master's Degree students Representative in Course Council

July, 2019 → March 2021

Computer Science and Engineering

University of Bologna

- <https://corsi.unibo.it/magistrale/IngegneriaScienzeInformatiche/coordinatore-consiglio>

Master's Degree students Representative in AQ Council

July, 2019 → March 2021

Computer Science and Engineering

University of Bologna

- <https://corsi.unibo.it/magistrale/IngegneriaScienzeInformatiche/commissioni>

Internship

Oct., 2017 → Jan., 2018

LIAM Lab

Spilamberto (MO), Italy

- Study of OPCUA communication protocol
- Supervisor: Prof. Matteo Sartini

DEVELOPMENT OF RESEARCH-RELATED SOFTWARE

PSyKE

November, 2021 → Ongoing

- a (python) platform for symbolic knowledge extraction from sub-symbolic predictors.
- <https://github.com/psykei/psyke-python>

LANGUAGE SELF-ASSESSMENT

	Listening	Reading	Interaction	Speaking	Writing
Italian	Native language				
English	C1	C1	B2	B2	B2
French	B2	B2	B1	B1	B1

TECHNICAL STRENGTHS

Programming Paradigms	imperative, object oriented, functional, logic
Software configuration	Windows and Linux installation and configuration
Programming Languages	Python, Java, Scala, C, C++, C#, Prolog, R, Lua, JavaScript, Php
Data Analysis Tools	R, Python + Pandas, NumPy, Scikitlearn, Keras, Weka and Meka
Networking	Socket (TCP & UDP), HTTP, RESTful WebAPI
Databases	SQL, MySQL, MongoDB, Vertica
Development tools	Git, Mercurial, Maven, Gradle, Docker
Markup languages	Markdown, L ^A T _E X, HTML
IDEs	PyCharm, IntelliJ Idea, Visual Studio, Eclipse, Android Studio, RStudio

ADDITIONAL INFORMATION

About me: I am an engineer and software developer with experience in machine learning and data mining. I can both work in team or alone. I always prefer deep analysis and discussion on the problem along with wide research in literature before solving it.

Interests: Artificial Intelligence, Machine Learning, Logic, Data Mining, Artificial Vision, Robotics (swarm robotics and adaptation).

Matteo Magnini, March 17, 2022