



Marco Miccheli

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WORK EXPERIENCE

R&D competence center manager

S3K S.p.a. [05/09/2022 – Current]

City: Rome | Country: Italy

I am responsible for the technical and scientific aspects of the solution proposed by S3K to our customers, in particular the ones concerning artificial intelligence. I lead a team of data scientists, and together we elaborate on the best solution that fits the specific issue: from data selection/ingestion to prediction models' implementation (machine learning models) and communication with stakeholders.

Machine learning lecturer

Università Degli studi di Roma - La Sapienza [24/09/2023 – Current]

City: Rome | Country: Italy

Teaching machine learning techniques applied to Construction digital twin for the second level master's degree "construction digital twin & artificial intelligence". From exploratory data analysis to interference and evaluation.

Research Scientist, Machine Learning

Translated Srl [01/09/2019 – 15/04/2022]

City: Rome | Country: Italy | Website: www.translated.com

Research project:

Bayesian estimate of human translators' skills and reviewers' reliability. I started from data retrieval (mySQL on database as beginner), passing through data cleansing, and finally I created models in Python (PyMC3 probabilistic programming framework). The models were validated with experiments and led to new ranking system for the translators and to the availability of unbiased translation-quality estimate.

Supervisor for AI projects

Pi School [01/04/2019 – 01/01/2021]

City: Rome | Country: Italy

Coordination and supervision of applied Artificial Intelligence projects (big data analysis, market analysis and tasks automation) commissioned by external companies to deliver Proof of Concepts (PoC) for specific business cases.

Mathematics and physics teacher

independent teacher; "No Problem ASDC" [15/07/2006 – 30/01/2018]

City: Rome | Country: Italy

I teach privately to high school students and university students:

- calculus
- classical physics
- modern physics

Volleyball coach

FIPAV and several volleyball club teams in Rome [01/09/2008 – 01/09/2018]

City: Rome | Country: Italy

- Scoutman (statistical match analysis)
- Assistant coach in a team of skilled and selected young players of Rome (13-14 years old).

- National championship assistant coach (serie B)
- Youth championship coach
- Regional championship coach

EDUCATION AND TRAINING

PhD in Physics

University of Rome - La Sapienza [10/10/2018 – 26/05/2022]

City: Rome | **Country:** Italy | **Field(s) of study:** Natural sciences, mathematics and statistics: • Physics • Statistics
| **Final grade:** Ottimo | **Level in EQF:** EQF level 8 | **NQF Level:** terzo ciclo | **Thesis:** Two essays concerning complexity, language and machine learning

Essay 1: "Bayesian estimate of human translators' skills and reviewers' reliability". (see working experience with Translated);

Essay 2: "Relatedness in the Era of Machine Learning". Developed a method to estimate relatedness between products (of the export basket of the countries) in the field of Economic Complexity, through NLP methods.

Alumnus at Pi School

Pi School [29/04/2019 – 21/06/2019]

City: Rome | **Country:** Italy

Received a two-months full scholarship to participate at the School of Artificial Intelligence of Pi School. Applied machine learning, NLP

Physics master's degree

Università Degli Studi di Roma La Sapienza [18/12/2008 – 23/10/2018]

City: Rome | **Country:** Italy | **Field(s) of study:** Natural sciences, mathematics and statistics: • Physics • Statistics
| **Final grade:** 110/110 | **Level in EQF:** EQF level 7 | **Thesis:** Volleyball as dynamical system.

- solid state physics
- Superconductivity
- Complex systems physics
- C, Python
- Machine Learning
- Sport Match analysis

Master's thesis: "Volleyball as dynamical system".

I used machine learning techniques to study the complex structure of the volleyball game, regarded as a dynamical system. In particular I built a model using a recurrent neural network (LSTM), and I showed that deep learning can be a better instrument to recognize the game pattern, with respect to traditional ways (Markov chain, conditional probability). The model I built can learn the structure of the game, generate new game-rallies and distinguish playing styles of different teams.

Physics bachelor

Università degli Studi di Roma La Sapienza [15/09/2005 – 18/12/2008]

City: Rome | **Country:** Italy | **Level in EQF:** EQF level 6

- Calculus
- Classical Physics
- Quantum and statistical mechanics
- Physics of matter
- C, C++
- NMR for medical physics

Bachelor's thesis: "NMR role in osteoporosis diagnosis"

I studied the efficacy of Nuclear Magnetic resonance techniques in osteoporosis preventive diagnosis. In particular I discussed how Relaxation Times (T1 and T2) and microimaging could be used instead of invasive techniques like x-ray and biopsy.

- Final Mark: 104/110

High school

Liceo Scientifico Statale Ignazio Vian PNI [01/09/2000 – 04/07/2005]

City: Bracciano | Country: Italy | Level in EQF: EQF level 4

- Math
- Physics
- Visual Basic programming
- Microsoft Office usage
- English
- Italian literature

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2
SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Spanish

LISTENING A2 READING B2 SPOKEN PRODUCTION A1
SPOKEN INTERACTION A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

SQL(Beginner) / Python (proficient) / microsoft office / Git / LaTeX (proficient) / aws

ORGANISATIONAL SKILLS

Organisational skills

High skill with large groups management and leading

Good problem solving skill

Good skills with work planning

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- Good teaching and communication skills, gained through my experience with math and physics private lessons and my volleyball coaching activity
- High cooperating skill
- Good adaptability to different contexts

OTHER SKILLS

Other skills

- Basic Life Support and Defibrillation certificate (BLSD)