Matteo Bunino

Data Science master student

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Nationality: Italian (Permanent resident of EU)

KEY STRENGTHS

Advanced statistical inference; Machine Learning and Deep Learning modeling (CNN, GCN, LSTM, generative models); Reinforcement Learning; Big Data processing (Hadoop and Spark); very good knowledge of Python, PyTorch, Numpy and Sklearn.
Team player: took part in team-based projects and competitions that gave me the opportunity to improve my soft skills.

EDUCATION

Master of Science degree in Data Science and Engineering (Msc.), *Graduates Jul 2022*
Double degree at:
- Polytechnic University of Turin, Italy
- EURECOM, Sophia-Antipolis, France

Bachelor of Science in Computer Engineering (BSc.), *2016 - 2019*

Polytechnic University of Turin, Italy

WORK EXPERIENCE

Research Intern, (Sep 2021 - Present) - *Huawei, München, Germany*
Studied the state-of-the-art literature of Deep Reinforcement Learning (DRL) applications to malware analysis. Collaborated with the research team to define the research direction. Implemented a set of training environments for a Reinforcement Learning agent.

Big Data Analyst Intern, (Mar 2019 - Jun 2019) - *Technology Reply, Turin, Italy*
Developed a machine learning pipeline to extract semantic information from handwritten text in bank transactions. Transactions have been organized in an OWL ontology, for semantic queries aimed at user profiling.

LANGUAGES

Italian: Native   **English**: Fluent   **French**: Conversational

AWARDS AND INTERESTS

Synthetic Biology summer course, Uppsala, Sweden
Learned the basics of artificial protein synthesis (2019).

High school students representative
Organize student activities and take part in the school council, (2015 - 2016).

Martial artist
Kung fu practitioner (2017 - present).

MORE ABOUT EDUCATION

Deep learning and machine learning modeling, EURECOM (France) and Polytechnic
University of Turin (Italy) courses:

- *Machine learning and deep learning* (Turin). **Grade**: 30/30
- *Mathematics in machine learning* (Turin). **Grade**: 30 cum laude / 30.
- *Data science lab* (Turin). **Grade**: 30 cum laude / 30.
- *Numerical optimization* (EURECOM). **Grade**: 17 / 20.
- *Deep Learning* (EURECOM). **Grade**: 16.5 / 20.
- *Advanced Statistical Inference* (EURECOM). **Grade**: 20 / 20.
- *Statistical methods in data science* (Turin). **Grade**: 30 / 30.

Graph Convolutional Networks for anomaly detection in financial graphs, EURECOM
Semester project, *(Oct 2020 - Mar 2021)*

- Theoretical analysis of the current state of the art of Graph Convolutional Networks.
- Implemented and compared methods for scalable processing on huge transaction graphs.

Energy based models (EBM), EURECOM Semester project, *(Mar 2021 – Jun 2021)*

- Theoretical study of EBM and comparison with other generative models such as Variational Autoencoders (VAEs).
- Comparison of different versions of Markov chain (MCMC) sampling from learned data distribution: Langevin dynamics, SGHMC.
- Successful implementation of a working model, fully compliant with mathematical theory. Still not present in literature.

Next steps

Undertake a PhD in Artificial Intelligence with a specialization in Reinforcement Learning.