Luca **Moschella**

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Education

Sapienza University of Rome   *Rome, Italy*
PHD IN COMPUTER SCIENCE   *2020 - present*
- Supervisor: Prof. Emanuele Rodolà.

Sapienza University of Rome   *Rome, Italy*
M.S. IN COMPUTER SCIENCE   (GRADUATED WITH 110/110 CUM LAUDE, GRADE AVERAGE: 30.3/30)   *2018 - 2019*
- Dissertation: Neurospectralization: Learning to hear shapes
- Supervisor: Prof. Emanuele Rodolà.

Pi School ↗   *Rome, Italy*
SCHOOL OF ARTIFICIAL INTELLIGENCE   *April 29 - June 21, 2019*
- Received a two-months full scholarship of 25'000€ to participate at the School of Artificial Intelligence of Pi School. As a scholarship winner, I worked on a project presented by the National Congress of Notaries developing AI-based solutions on NLP problems.

Sapienza University of Rome   *Rome, Italy*
B.S. IN COMPUTER SCIENCE   (GRADUATED WITH 110/110 CUM LAUDE, GRADE AVERAGE: 30.5/30)   *2014 - 2017*
- Dissertation: Experimental analysis of some topological aspects of bayesian networks in the modeling of peer-evaluation.
- Supervisor: Prof. Andrea Sterbini.

Experience

NNAISENSE ↗   *Lugano, Switzerland*
RESEARCH INTERN   *Jul. 2021 - Dec. 2021*
- Designed and implemented a generic deep learning template to bootstrap industrial projects and automate the hyperparameters tuning.
- Improved the company infrastructure to streamline the development and deployment of deep learning solutions.

Deep Learning and Applied AI course ↗   *Sapienza University of Rome*
TEACHING ASSISTANT   *2nd semester 2020 and 2021*
- Designed and implemented the course lab sessions to explain and show the students fundamentals and cutting-edge techniques in many areas of deep learning, with a strong emphasis on interactions and animations to aid the students understanding.

Honors

ABB Scholarships
Won scholarships for academic merits sponsored by ABB for ten consecutive years.

Sapienza University of Rome Scolarship
Won a scholarship for academic merits sponsored by Sapienza to fully cover the B.S. tuition fees.

Projects selection

NN Template ↗   *Sapienza University of Rome*
OPEN SOURCE   *Mar. 2021*
- Popular template to bootstrap a *PyTorch* project with *PyTorch Lightning*, *Hydra*, *W&B*, *DVC* and *Streamlit*.
- Enforce best practices in data versioning, code organization, reproducibility, hyperparameters comparison and model inference.

Dynamic sketch recognizer ↗   *Sapienza University of Rome*
COURSE OF COMPUTER VISION   *Jan. 2019 - Feb. 2019*
- A system that can recognize sketches drawn on a touchscreen (numbers, MNIST-like).
- Built an Android application to gather the dataset, used Python with *tsfresh* to extract features from time series and *scikit-learn* to classify.

Crimes at Los Angeles ↗   *Sapienza University of Rome*
COURSE OF MACHINE LEARNING   *Feb. 2018 - Mar. 2018*
- Analized the crimes dataset made available by the city of Los Angeles and classified the crime type given the other available features.

Semantic recommender system ↗

Course of Web and Social Information Extraction

- Selected as the best course project ↗ in 2018.
- A system that can recommend to Twitter users whichever item can be expressed in terms of BabelNet ↗ semantic categories.
- Twitter users and items are represented in the same space, in terms of semantic categories, exploiting all the available information.

Biotouch ↗

Course of Biometric System

- A system that can recognize users from their writing style on a touchscreen.

Talks

Spectral Unions of Partial Deformable 3D Shapes   **Poster Presenter**   *Jan. 14, 2021*   *Digital*

@ Mediterranean Machine Learning summer school ↗

Learning Set Operations for Deformable Shapes   **Poster Presenter**   *Apr. 24, 2020*   *Digital*

@ ELLIS Workshop on Geometric and Relational Deep Learning ↗

Summer Schools

Mediterranean Machine Learning summer school ↗	Admission upon selection	*Jan 11-16, 2021*	*Digital*
ACDL 2020: 3rd Advanced Course on Data Science & Machine Learning ↗	Admission upon selection	*July 13-17, 2020*	*Siena, Italy*
Machine Learning for Non-Matrix Data ↗		*June 26, 2020*	*Digital*
3rd International Summer School on Deep Learning ↗		*July 22-26, 2019*	*Warsaw, Poland*
Symposium on Geometry Processing ↗	Student Volunteer	*July 8-10, 2019*	*Milan, Italy*

Publications

Peer reviewed

[Nor+21b]   A. Norelli, A. Santilli, G. Mariani, **L. Moschella**, G. Parascandolo, S. Melzi, and E. Rodolà. "Symbol Interpretation Task (SIT)". In: *Beyond the Imitation Game Benchmark (BIG-bench) in the Workshop on Enormous Language Models (WELM) at ICLR*. 2021. URL: `https://github.com/google/BIG-bench`.

[Tra+21]   G. Trappolini, L. Cosmo, **L. Moschella**, R. Marin, S. Melzi, and E. Rodolà. "Shape Registration in the Time of Transformers". In: *Thirty-Fifth Conference on Neural Information Processing Systems*. 2021. URL: `https://openreview.net/forum?id=ui4xChWcA4R`.

[De +17a]   M. De Marsico, **L. Moschella**, A. Sterbini, and M. Temperini. "Effects of Network Topology on the OpenAnswer's Bayesian Model of Peer Assessment". In: *Data Driven Approaches in Digital Education*. Ed. by É. Lavoué, H. Drachsler, K. Verbert, J. Broisin, and M. Pérez-Sanagustín. Lecture Notes in Computer Science. Cham: Springer International Publishing, 2017, pp. 385–390. ISBN: 978-3-319-66610-5. DOI: `10.1007/978-3-319-66610-5_31`.

[De +17b]   M. De Marsico, **L. Moschella**, A. Sterbini, and M. Temperini. "Performance Variations of the Bayesian Model of Peer-Assessment Implemented in OpenAnswer Response to Modifications of the Number of Peers Assessed and of the Quality of the Class". In: *2017 16th International Conference on Information Technology Based Higher Education and Training (ITHET)*. July 2017, pp. 1–6. DOI: `10.1109/ITHET.2017.8067814`.

Preprints

[Mos+21]   **L. Moschella**, S. Melzi, L. Cosmo, F. Maggioli, O. Litany, M. Ovsjanikov, L. Guibas, and E. Rodolà. *Spectral Unions of Partial Deformable 3D Shapes*. Mar. 31, 2021. arXiv: `2104.00514 [cs]`. URL: `http://arxiv.org/abs/2104.00514` (visited on 04/02/2021).