Riccardo de LUTIO

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Belgian & Italian
24.10.1995

EDUCATION

2018 -	**Eidgenössische Technische Hochschule Zürich, ETHZ** Ph.D. in the *EcoVision Lab*, *Photogrammetry and Remote Sensing Group*, supervised by Prof. Jan Dirk Wegner and Prof. Konrad Schindler.
2016 - 2017	**Imperial College London** M.Sc. in Machine Learning (Computing), First Class Honours.
2015 - 2016	**Imperial College London** Exchange program for third year of Bachelor in Physics.
2013 - 2016	**Ecole Polytechnique Fédérale de Lausanne, EPFL** Bachelor in Physics.
2013	**Lycée Vauban, Luxembourg** French Baccalaureate, Scientific, with High Honours.

PUBLICATIONS AND SELECTED PROJECTS

2022	Riccardo de Lutio, Alex Becker, Stefano D'Aronco, Stefania Russo, Jan D. Wegner, Konrad Schindler. **Learning Graph Regularisation for Guided Super-Resolution.** Under review.
2022	Riccardo de Lutio, Damon Little, Barbara Ambrose, Serge Belongie. **The Herbarium 2021 Half–Earth Challenge Dataset and Machine Learning Competition.** Frontiers in Plant Science.
2021	Riccardo de Lutio et al. **Digital Taxonomist: Identifying Plant Species in Community Scientists' Photographs.** ISPRS Journal of Photogrammetry and Remote Sensing.
2021	Riccardo de Lutio, Damon Little, Barbara Ambrose, Serge Belongie. **The Herbarium 2021 Half-Earth Challenge Dataset.** CVPRW.
2019	Riccardo de Lutio, Stefano D'Aronco, Jan D. Wegner, Konrad Schindler. **Guided Super-Resolution as Pixel-to-Pixel Transformation.** In *International Conference on Computer Vision, ICCV.*
2017	Master Project, **F1 Overtaking Model** with Mercedes F1 Team and Prof. Marc Deisenroth. • Creating a probabilistic model for overtaking during a race, key aspect of race simulation engine.
2015 - 2016	Bachelor Project, **Machine Learning and Galaxy Surveys** with Dr. David Clements. • Finding clusters in an unsupervised way and comparing them with the astronomical classification of the galaxies.

EXPERIENCE

2017 - 2018	**Ecole Polytechnique Fédérale de Lausanne, EPFL** Scientific Assistant in the *Machine Learning and Optimization Laboratory* working on « A Machine Learning Platform for Emerging Viral Diseases in Africa » (part of SAFIA project) with Prof. Martin Jaggi and Dr. Mary-Anne Hartley • Designing an algorithm that helps clinicians better predict the cause of paediatric fever • Potentially helps detecting epidemic outbursts
2016	**Bonn University** Research placement during the summer at the *Argelander-Institut für Astronomie* working on « Artificial neural networks handling noisy features » with Dr. Malte Tewes • Noisy multivariate data, which depend on some physical explanatory parameters • Creating a model neural network architecture that finds accurate estimates for parameters

ADDITIONAL ACTIVITIES

2021	Organiser of the Herbarium Competition, 8th Fine-Grained Visual Categorisation, *Conference on Computer Vision and Pattern Recognition, CVPR.*
2020 -	Co-Editor of the Medium blog of the EcoVision Lab.
2019	Co-Organiser of the tutorial session at the *1st Swiss Workshop on Machine Learning for Environmental and Geosciences, MLEG.*
2018	Volunteer responsible for speakers at *2nd Applied Machine Learning Days, AMLD.*
2013	Team leader of the Junior entreprise *Voiles de Vauban.* Raising +30'000€ to set up a sailing team and race in a stage of the French national sailing championship.

TEACHING

Courses	Introduction to object-oriented programming (C++), Image Interpretation, Geodetic Project Course: 3D modeling using different sensors.
Supervision	*Using machine learning to identify plant species in images acquired by citizen scientists*, Yihang She. *Curriculum learning - helping computers to gradually learn new things*, Luca Gaia. *Detektion von Füssgängerstreifen in Luftbildern*, Elie Vuadens.

SKILLS

Languages	Python, C++, Matlab, Prolog, Java, Javascript, Bash.
Frameworks	PyTorch, NumPy, Tensorflow, Sci-Kit Learn.
Misc.	Unix, vim, Git, Latex, Reality Capture.

LANGUAGE

French (native), Italian (native), English (fluent, C1 certificate), Spanish (fluent, C1 certificate), German (B1 - B2)

PERSONAL INTERESTS

2019	Bike-packing across South Korea.
2018	Road trip from Lausanne to Mongolia and back, crossing 22 countries and documenting the journey.
2018	Patrouille des Glaciers.
2017	Everest Base Camp trek, Marathon swim across Lake Geneva, Rome to Geneva bike ride in 3 days.
2016	RedBull Can You Make It, travelling across Europe in seven days with no money and no phone, web series on RedBullTV.
2009 - 2014	Qualified sailing instructor, Mal di Mare sailing school, using sailing as social inclusion tool.