

RICCARDO CADEI

Machine Learning Researcher

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Boston (MA), USA

16 November 1998 (ITA)

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Education

Harvard University

Visiting Graduate Student

Sept 2022 – March 2023

Cambridge (MA), United States

Project: Causal Inference for Machine Learning

Department: Harvard Data Science Initiative; Harvard School of Public Health

EPFL

M.Sc. Data Science

Sept 2020 – March 2023

Lausanne, Switzerland

Conferences: CISBAT 2021, NeurIPS 2021, CVPR 2022, NeurIPS 2022

Summer Schools: M2L 2020, Neurosymbolic Programming 2022, M2L 2022

Politecnico di Milano

B.Sc. Mathematical Engineering

Sept 2017 – July 2020

Milan, Italy

Grade: 110/110

Thesis: Mathematical Programming for activity planning in Oncology Day-Hospital

Associations: PoliMi Data Scientists, Associazione Ingegneri Matematici

Experience

Schlumberger Doll Research

Feb 2022 – Aug 2022

Cambridge (MA), United States

Machine Learning Researcher: Developing new methods and applications of Deep Learning for causal modeling and interpretation of acoustic subsurface data.

École polytechnique fédérale de Lausanne

Nov 2020 – Feb 2022

Lausanne, Switzerland

Research Assistant at VITA Lab:

Introducing a Causal formalism and proposing a Robust and Adaptive modular architecture for Motion Forecasting from Causal Representation perspective. [1], [2]

Teaching Assistant: In Introduction to Machine Learning (BIO-322)

Research Assistant at MLO>IGH Lab (Summer Intern): Developing a mobile app for (non-invasive) upper body posture detection using Deep Learning.

Research Assistant at LESO-PB Lab: Developing a U-Net based model for detection of available rooftop area to install solar panels from satellite images. [3]

L.O.L. Consultants

Dec 2020 – Feb 2021

[remote] Melbourne, Australia

Machine Learning Engineer: Detecting available rooftop area to install photovoltaic panels from high quality satellite images using Deep Learning.

Publications

- [1] Yuejiang Liu, Riccardo Cadei, Jonas Schweizer, Sherwin Bahmani, and Alexandre Alahi. "Towards Robust and Adaptive Motion Forecasting: A Causal Representation Perspective". In: *IEEE/CVF International Conference on Computer Vision and Pattern Recognition* (2022).
- [2] Yuejiang Liu, Riccardo Cadei, and Alexandre Alahi. "Towards Robust and Adaptive Motion Forecasting: A Causal Representation Perspective". In: *NeurIPS 2021 Workshop on Distribution Shifts: Connecting Methods and Applications*.
- [3] Roberto Castello, Alina Walch, Raphaël Attias, Riccardo Cadei, Shasha Jiang, and Jean-Louis Scartezzini. "Quantification of the suitable rooftop area for solar panel installation from overhead imagery using Convolutional Neural Networks". In: *Journal of Physics: Conference Series*. Vol. 2042. 1. IOP Publishing, 2021, p. 012002.

Awards

Machine Learning

Generali Data Challenge 2021

Churn Classification Dataathon:
Best model and code out of 280 participants.

Oracle GraphML Contest 2019

1st pl. in the Kaggle final challenge of Graph Machine Learning course at Politecnico di Milano in partnership with Oracle Labs (Zurich).

ML for Networking Contest 2019

1st place in the Kaggle final challenge of ML for Networking course at Politecnico di Milano.

Mathematics

International competition for mathematical and logical games 2018

5th national place (ITA), class L2 (U21).

Grand Prix of Applied Mathematics

5th national place (ITA) out of 7500+ students. 2017

6th national place (ITA) out of 7500+ students. 2016

Projects

For a structured summary of my projects visit my Personal Portfolio clicking [\[here\]](#) or scanning the QR Code on the right.



Released Packages

CRAN: Causal Rule Ensemble (R) 2022

Coding

Machine Learning: Python, R, Julia

Deep Learning: PyTorch, Tensorflow

Math: MATLAB, Python, R, AMPL

Big Data: Spark, SQL, HDFS, AWS

Programming: Scala, C

App and Web: HTML, CSS, Android Studio

Languages

Italian: C2, English: C1, French: A1

Referees

Prof. Francesca Dominici Harvard

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Other Interests

Marathon Runner for Atletica Paratico
(2018 Marathon regional champion Under 23)

Ex Athletics Coach at Politecnico di Milano

Long distance hiker and cycle tourist