Emanuele La Malfa

cs.ox.ac.uk/people/emanuele.lamalfa/

Education

University of Oxford	Oct. 2019 – Present
PhD/DPhil Student in Computer Science, advised by prof. Marta Z. Kwiatkowska	*Oxford, UK*
Polytechnic University of Milan	Feb. 2015 – Sept. 2017
Master's Degree in Computer Science and Engineering	*Milan, Italy*
Polytechnic University of Milan	Sept. 2011 – Sept. 2014
Bachelor's Degree in Computer Engineering	*Milan, Italy*

Work Experience

Research Assistant — Oct. 2019 – Mar. 2021
Enabling rapid adoption of artificial intelligence through an anonymized data protocol and explainable models. — *University of Oxford, UK*

- Collaboration with GenieAI.
- Funded through the InnovateUK scheme.
- The collaboration led to a paper published at EMNLP'20.

Consultant — Mar. 2018 – Aug. 2019
Consultant – IBM architect path – — *IBM, Milan, Italy*

- Design, development and deploy of a search engine for a public financial institution.
- Design, development and deploy of a cloud document management system for a public financial institution.

Publications

Emergent Linguistic Structures in Neural Networks are Fragile
Under submission (long paper)
Emanuele La Malfa*, Matthew Wicker, Marta Kwiatkowska

Deep Neural Networks as Complex Networks
Under review (long paper)
Emanuele La Malfa*, Gabriele La Malfa*, Claudio Caprioli, Giuseppe Nicosia, Vito Latora

***The King is Naked**: on the Notion of Robustness for Natural Language Processing*
AAAI'22 (long paper, main track) (**oral presentation**)
Emanuele La Malfa*, Marta Kwiatkowska

Characterizing Learning Dynamics of Deep Neural Networks via Complex Networks
IEEE-ICTAI'21 (long paper, main track)
Emanuele La Malfa*, Gabriele La Malfa*, Giuseppe Nicosia, Vito Latora

On Guaranteed Optimal Robust Explanations for NLP Models
IJCAI'21 (long paper, main track)
Emanuele La Malfa*, Rhiannon Michelmore, Agnieszka Zbrzeny, Nicola Paoletti, Marta Kwiatkowska

Assessing Robustness of Text Classification through Maximal Safe Radius Computation
EMNLP'20 (long paper)
Emanuele La Malfa*, Min Wu, Luca Laurenti, Benjie Wang, Anthony Hartshorn, Marta Kwiatkowska

Invited Lectures

Robustness for Natural Language Processing	22/04/2022
Lecture – Deep Fridays	*University of Bologna, Italy*
Explainable AI	04/03/2022
Lecture – Advanced Artificial Intelligence Course	*Royal Holloway University of London, UK*

Teaching Experience

Probabilistic Model Checking	2022 (MT)
Practicals	*University of Oxford, UK*
Machine Learning	2021 (MT)
Classes	*University of Oxford, UK*
Probabilistic Model Checking	2021 (MT)
Practicals	*University of Oxford, UK*
Fundamentals of Computer Science	2016 (Oct.-Dec.)
Practicals	*Polytechnic University of Milan, Italy*

Tutoring and Mentoring

University of Oxford 2022

Tutoring of a student who I followed with his master's thesis.

Lead the Future - Mentor 2022

Lead the Future is a no-profit organization that helps Italian talents in STEM disciplines to find their path to brilliant careers.

Miscellaneous

Programming Languages: Python (fluent), worked with many languages/tools as part of my profession (C, js, ...)
Languages: Italian (native), English (fluent), Spanish (intermediate)
Conference Chair: LOD2020, LOD2021, LOD2022
Interests: Books (any kind, any topic)

Activities

Ukrainian Global University - Interviewer June-May 2022

I interviewed a dozen of perspective undergraduate Ukrainian students who want to study in a partner university abroad.

Eutanasia Legale - Volunteer July 2021

I have collected signatures for a referendum to decriminalize euthanasia. The overall campaign gathered 1.2 million valid signatures.

Awards and Scolarships

Trinity College Graduate Scholarship 2020-21, 2021-2022

Trinity College, University of Oxford, UK