

# Emanuele La Malfa

[cs.ox.ac.uk/people/emanuele.lamalfa/](https://cs.ox.ac.uk/people/emanuele.lamalfa/)

## Education

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

## Work Experience

<b>Research Assistant</b> <i>Enabling rapid adoption of artificial intelligence through an anonymized data protocol and explainable models.</i> <ul style="list-style-type: none"><li>• Collaboration with GenieAI.</li><li>• Funded through the InnovateUK scheme.</li><li>• The collaboration led to a paper published at EMNLP'20.</li></ul>	Oct. 2019 – Mar. 2021 University of Oxford, UK
<b>Consultant</b> <i>Consultant – IBM architect path –</i> <ul style="list-style-type: none"><li>• Design, development and deploy of a search engine for a public financial institution.</li><li>• Design, development and deploy of a cloud document management system for a public financial institution.</li></ul>	Mar. 2018 – Aug. 2019 IBM, Milan, Italy

## Publications

<b>Emergent Linguistic Structures in Neural Networks are Fragile</b> Under review (long paper) Emanuele La Malfa*, Matthew Wicker, Marta Kwiatkowska
<b>Deep Neural Networks as Complex Networks</b> Under review (long paper) Emanuele La Malfa*, Gabriele La Malfa*, Claudio Caprioli, Giuseppe Nicosia, Vito Latora
<b>The King is Naked: on the Notion of Robustness for Natural Language Processing</b> AAAI'22 (long paper, main track) ( <b>oral presentation</b> ) Emanuele La Malfa*, Marta Kwiatkowska
<b>Characterizing Learning Dynamics of Deep Neural Networks via Complex Networks</b> IEEE-ICTAI'21 (long paper, main track) Emanuele La Malfa*, Gabriele La Malfa*, Giuseppe Nicosia, Vito Latora
<b>On Guaranteed Optimal Robust Explanations for NLP Models</b> IJCAI'21 (long paper, main track) Emanuele La Malfa*, Rhiannon Micheltore, Agnieszka Zbrzeny, Nicola Paoletti, Marta Kwiatkowska
<b>Assessing Robustness of Text Classification through Maximal Safe Radius Computation</b> EMNLP'20 (long paper) Emanuele La Malfa*, Min Wu, Luca Laurenti, Benjie Wang, Anthony Hartshorn, Marta Kwiatkowska

## Teaching Experience

<b>Ethical Computing in Practice</b> <i>Practicals</i>	2023 (HT) University of Oxford, UK
<b>Deep Learning in Healthcare</b> <i>Practicals</i>	2023 (HT) University of Oxford, UK
<b>Probabilistic Model Checking</b> <i>Practicals</i>	2022 (MT) University of Oxford, UK
<b>Machine Learning</b> <i>Classes</i>	2021 (MT) University of Oxford, UK
<b>Probabilistic Model Checking</b> <i>Practicals</i>	2021 (MT) University of Oxford, UK
<b>Fundamentals of Computer Science</b> <i>Practicals</i>	2016 (Oct.-Dec.) Polytechnic University of Milan, Italy

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## Invited Lectures, Talks and Presentations

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### On the Notion of Robustness for Natural Language Processing

17/01/2023

Departmental Talk

King's College University of London, UK

### 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

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## Tutoring and Mentoring

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### 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.

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## Miscellaneous

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**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)

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## Volunteering

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### The Kharkiv and Przemyśl Project

August 2022

I spent a week in Przemyśl (Poland) as a volunteer to help refugees who arrived (returned) from (to) Ukraine.

### 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.

### Euthanasia Legale - Volunteer

July 2021

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

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## Awards and Scholarships

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### Trinity College Graduate Scholarship

2020-21, 2021-2022

Trinity College, University of Oxford, UK