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Work Experience

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**Post Doctoral Researcher**

*Benchmarking Large Language Models.*

- Principal Investigator: Prof. [Michael Wooldridge](#).

Jul. 2023 – Current  
*University of Oxford & The Alan Turing Institute, UK*

**Research Assistant**

*Enabling rapid adoption of artificial intelligence through an anonymized data protocol and explainable models.*

- Principal Investigator: Prof. [Marta Kwiatkowska](#).
- Collaboration with [GenieAI](#) and funded through the [InnovateUK](#) scheme.
- The collaboration led to a paper published at [EMNLP'20](#).

Oct. 2019 – Mar. 2021  
*University of Oxford, UK*

**Consultant**

*IBM, Global Business Unit*

- 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.

Mar. 2018 – Aug. 2019  
*IBM, Milan, Italy*

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Education

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**University of Oxford**

*PhD (DPhil) in Computer Science, supervised by Prof. [Marta Kwiatkowska](#)*

Oct. 2019 – 2023  
*Oxford, UK*

**Polytechnic University of Milan**

*Master's Degree in Computer Science and Engineering*

Feb. 2015 – Sept. 2017  
*Milan, Italy*

**Polytechnic University of Milan**

*Bachelor's Degree in Computer Engineering*

Sept. 2011 – Sept. 2014  
*Milan, Italy*

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Publications

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**NLP and Linguistics**

**Treatment-response Robustness with Unreliable Text Generators**

Under review (long paper)

Emanuele La Malfa\*, Christoph Weinhuber

**Language Models Tokenizers Introduce Unfairness Between Languages**

Under review (long paper)

Aleksandar Petrov\*, Emanuele La Malfa, Philip Torr, Adel Bibi

**Emergent Linguistic Structures in Neural Networks are Fragile**

Under review (long paper)

Emanuele La Malfa\*, Matthew Wicker, Marta Kwiatkowska

**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

**On Guaranteed Optimal Robust Explanations for NLP Models**

IJCAI'21 (long paper, main track)

Emanuele La Malfa\*, Rhiannon Michelmores, 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

**Complex Networks Theory and Deep Learning**

**Deep Neural Networks as Complex Networks**

Pre-print (long paper)

Emanuele La Malfa\*, Gabriele La Malfa\*, Claudio Caprioli, Giuseppe Nicosia, Vito Latora

**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

## Teaching Experience

### Ethical Computing in Practice

Practical sessions

2023 (HT)  
University of Oxford, UK

### Deep Learning in Healthcare

Practical sessions

2023 (HT)  
University of Oxford, UK

### Probabilistic Model Checking

Practical sessions

2022 (MT)  
University of Oxford, UK

### Machine Learning

Classes

2021 (MT)  
University of Oxford, UK

### Probabilistic Model Checking

Practical sessions

2021 (MT)  
University of Oxford, UK

### Fundamentals of Computer Science

Practical sessions

2016 (Oct.-Dec.)  
Polytechnic University of Milan, Italy

## Invited Lectures, Talks, and Presentations

### On Robustness for Natural Language Processing

Group Talk

19/04/2023

ICREA, Barcelona

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

Departmental Talk

17/01/2023

King's College University of London, UK

### Robustness for Natural Language Processing

Lecture – *Deep Fridays*

22/04/2022

University of Bologna, Italy

### Explainable AI

Lecture – Advanced Artificial Intelligence Course

04/03/2022

Royal Holloway University of London, UK

## Tutoring and Mentoring

### University of Oxford

Tutoring two students for their part-B projects.

2022

### Lead the Future - Mentor

Lead the Future is a nonprofit organization that helps Italian talents in STEM disciplines to find their path to brilliant careers.

2022-current

## 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, LOD2023

**Interests:** Books (any kind, any topic)

## Volunteering

### Ukrainian Global University - Interviewer

I interviewed Ukrainian students who want to study in a partner university abroad.

April-June 2023

### The Kharkiv and Przemyśl Project

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

August 2022

### Ukrainian Global University - Interviewer

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

June-May 2022

### Eutanasia Legale - Volunteer

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

July 2021

## Awards and Scholarships

### Trinity College Graduate Scholarship

2020-21, 2021-2022  
Trinity College, University of Oxford, UK