

Erasmo Purificato

Researcher

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About Me -

I'm a technology enthusiast and a great football passionate. My life is marked by Muhammad Ali's quote "Impossible is nothing".

Hard Skills —

2 +	User Profiling	•	•	•	•	
	AI Ethics - Fairness	•	•	•	•	
Q_0^{α}	Machine Learning	•	•	•	•	
\otimes	Explainable AI	•	•	•		
	Recommender Systems	•	•	•		
4	Deep Learning	•	•	•		
Q	Information Retrieval	•	•	•		
(Computer Vision	•	•	•		

Soft Skills -

③	Teamwork	• • • • •
	Learning attitude	••••
\odot	Critical thinking	••••
ac.	Problem-solving	••••
	Leadership	••••
Q	Communication	••••
-	Time management	• • • • •

Work Experience

Jul 2021 -**Adjunct Professor** Guglielmo Marconi University Rome currently Principal Lecturer of the "Software Engineering" course for the Master's Degree Programme in Computer Engineering (LM-32).

Feb 2020 -Otto von Guericke University Magdeburg **Research Assistant** Research and teaching in the "Human-Centred Artificial Intelligence" currently group in the fields of HCAI, User Profiling, Responsible AI, Fairness, AI Ethics, Explainable AI and Usability.

Feb 2020 -Leibniz Institute for Educational Media | GEI Research Fellow Member of the department "Human-Centred Technologies for Educurrently cational Media", involved in research on Fairness and Explainability, and in running the institute's Usability Lab.

Sep 2018 -Serie A Football Match Analyst KlipDraw Jun 2019 Analysis of the best tactical plays and goals of the Italian Serie A matches, using KlipDraw Animate professional software.

Sep 2017 -IT Consultant Blue Reply Dec 2019 Positions held:

AI Expert

Project management, design and implementation of machine learning and deep learning systems with open source frameworks and libraries (e.g. PyTorch, Keras, Tensorflow, scikit-learn, pySpark, LIME, SHAP, Flask).

 Technical Leader of the Machine Learning Innovation Team Solution design and implementation of machine learning and deep learning use cases (churn analysis, predictive maintenance, fraud detection), both with IBM (Watson Studio, Watson Machine Learning) and open source tools (e.g. Python scripts, KNIME, Apache Spark) mainly in banking and financial areas.

Product Specialist

Project management and implementation of cognitive information retrieval systems with IBM tools (Watson Content Analytics, Watson Enterprise Search).

Education

May 2020 -

Otto von Guericke University Magdeburg Title of the doctoral project: "Human-Centred Fairness Analysis on currently Graph Neural Network-Based Models for Behavioural User Profiling". Feb 2018 -2nd level Master's degree in Artificial Intelligence University of Turin Dec 2019 In-depth studies on different sectors of Artificial Intelligence: Ma-

chine Learning, Deep Learning, Image Processing, Natural Language Processing, Business Intelligence, Big Data Analytics, AI Ethics.

Master Thesis (110/110)

PhD in Computer Science

Development of a Visual Search system for an e-commerce portal.

Master's degree Nov 2014 -University of Naples Federico II **Computer Engineering** May 2017 Specialization Area: Information Technology Management.

Master Thesis (110/110 cum Laude)

Multimedia and geographic data integration for cultural heritage information retrieval.

Bachelor's Degree Sep 2011 -University of Naples Federico II **Computer Engineering** Nov 2014 Focus: Artificial Intelligence theory and Software engineering.

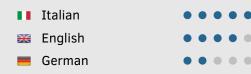
Bachelor Thesis (109/110)

Design of a programmable delay line in CMOS technology.

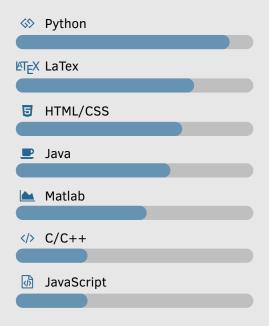
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Researcher

Languages



Programming



Certifications

Nov Football Data Intelligence
2022 SICS & Soccerment

Dec Recommender Systems
2020 Specialization

2020 **Specialization** *Coursera*

Dec Football Performance & Data 2018 Analysis

Elite Football Center

Apr Master in Data Analysis in Team 2018 Sports

360MSS

Mar Football Match Analyst 2017 Elite Football Center

Teaching and Invited Talks

Apr 2020 – currently

Teaching staff member Otto von Guericke University Magdeburg Responsible for the exercise course, consisting of carrying out human-centred artificial intelligence group projects or usability studies by employing eye-tracking devices. Teaching assistant holding theory lectures on "User Experience and Usability", "Responsible AI", "Algorithmic Fairness", "Explainable AI" and "Research Methods for Human-Centred Computing" for the following courses:

- Human-Centred Artificial Intelligence (Master)
- Knowledge Engineering and Digital Humanities (Master old)
- Introduction to Digital Humanities (Bachelor old)

Feb 2023 Invited talk speaker

Invited talk speaker DEFirst Reading Group Invited talk to present my CIKM'22 contributions entitled "Do Graph Neural Networks Build Fair User Models? Assessing Disparate Impact

and Mistreatment in Behavioural User Profiling".

Mar 2019 Invited seminar speaker

Invited seminar speaker

Seminar "Churn Prediction with Machine Learning" about the importance of customer churn prediction in companies and how to tackle it with machine learning methods, performed for the Master students

in Computer Engineering.

Feb 2019 – Knowledge Sharing program
Oct 2019 – Participation in events for kno

Reply er colleagues

Participation in events for knowledge sharing with other colleagues from all Reply companies.

 Decrypting Machine Learning models with LIME Labcamp (Turin, 17th October 2019)
 Speaker for a seminar about explainability techniques and the importance of trusting a Machine Learning model.

 Churn Prediction with Machine Learning Labcamp (Turin, 13th February 2019)
 Speaker for a seminar about the importance of customer churn prediction in a Telco company.

Selected Publications

Oct 2023

Leveraging Graph Neural Networks for User Profiling: Recent Advances and Open Challenges

E. Purificato, L. Boratto, E.W. De Luca

Proceedings of the 32nd ACM International Conference on Informa-

tion & Knowledge Management (CIKM'23)

Jul 2023

FairUP: A Framework for Fairness Analysis of Graph Neural Network-Based User Profiling Models

M. Abdelrazek, <u>E. Purificato</u>, L. Boratto, E.W. De Luca

Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR'23)

Oct 2022

Do Graph Neural Networks Build Fair User Models? Assessing Disparate Impact and Mistreatment in Behavioural User Profiling

<u>E. Purificato</u>, L. Boratto, E.W. De Luca

Proceedings of the 31st ACM International Conference on Information & Knowledge Management (CIKM'22)

Jun 2022

The Use of Responsible Artificial Intelligence Techniques in the Context of Loan Approval Processes

E. Purificato, F. Lorenzo, F. Fallucchi, E.W. De Luca

International Journal of Human-Computer Interaction (IJHCI)