

JOSE M. ALVAREZ

University of Pisa, Department of Computer Science, 56127, Italy

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EDUCATION

Scuola Normale Superiore

Nov 2020 - Present

Ph.D., Data Science

Advisor: Salvatore Ruggieri (University of Pisa)

Thesis: Topics in Fair Causal Machine Learning

Toulouse School of Economics

Sep 2015 - May 2017

M.Sc., Econometrics and Empirical Economics

University of Florida

Sep 2011 - May 2015

B.A., Economics and History, *summa cum laude*

EXPERIENCE

University of Pisa

Nov 2020 - Present

Early-Stage Researcher with NoBIAS ITN

Pisa, IT

- NoBIAS: Artificial Intelligence without Bias is part of the Marie Skłodowska-Curie Innovative Training Network (ITN) and funded by the European Union's Horizon 2020
- The Marie Skłodowska-Curie ESR position is through the University of Pisa's Knowledge Discovery and Data Mining Laboratory (KDD Lab)

SCHUFA Holding AG

Jul 2023 - Present

Visiting Research Scientist

Wiesbaden, GE

- Worked with the Innovation & Research team in developing methods to measure fairness in credit scores using causality-based frameworks

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Sep 2021 - Jan 2022

Visiting Research Scientist

Milan, IT

- Worked with Human Resources and Advanced Analytics in formalizing the current human-driven hiring process using fair ranking models

Deloitte Risk Advisory

May 2017 - Oct 2020

Senior Consultant - Operational & Financial Risk Modeler

Brussels, BE

- Designed, developed, and deployed statistical learning models for clients in the energy & utilities and financial sectors
- Developed an end-to-end time series forecasting tool at the Deloitte aiStudio in Frankfurt, Germany, as the chosen Belgium representative
- Conducted internal and external trainings in R programming, Git, Advanced Loss Given Default modeling (Basel II), and Survival Analysis modeling

UK Government - Cabinet Office

Jun 2016 - Aug 2016

Summer Economist

London, UK

- Provided insights via statistical analysis to policy makers on a range of topics, such as studying the volunteering determinants in the UK and the variation in electoral costs across local authorities

PUBLICATIONS

Jose M. Alvarez, Salvatore Ruggieri. “Counterfactual Situation Testing: Uncovering Discrimination under Fairness given the Difference.” *To appear in ACM EAAMO*, 2023. [paper]

Carlos Mougán, **Jose M. Alvarez**, Salvatore Ruggieri, Steffen Staab. “Fairness implications of encoding protected categorical attributes.” *To appear in ACM AIES*, 2023. [paper]

Jose M. Alvarez, Kristen M Scott, Salvatore Ruggieri, Bettina Berendt. “Domain Adaptive Decision Trees: Implications for Accuracy and Fairness.” *ACM FAccT*, 2023. [paper]

Salvatore Ruggieri, **Jose M. Alvarez**, Andrea Pugnanna, Laura State, Franco Turini. “Can We Trust Fair-AI?” *AAAI Conference on Artificial Intelligence*, 2023. [paper]

Matilde Lazzari, **Jose M. Alvarez**, Salvatore Ruggieri. “Predicting and explaining employee turnover intention.” *International Journal of Data Science and Analytics*, 2022. [paper]

WORKING PAPERS

Jose M. Alvarez, Salvatore Ruggieri. “The Initial Screening Order Problem.” *Feedback is welcome*. [paper]

Jose M. Alvarez. “What’s the Problem, Linda? The Conjunction Fallacy as a Fairness Problem.” *Feedback is welcome*. [paper]

INVITED TALKS, POSTERS, AND WORKSHOPS

2023 ECML PKDD Workshop on on Bias and Fairness in AI: *poster session*; 2022 IMS International Conference on Statistics and Data Science (ICSIDS): *poster session*; 2022 NeurIPS Workshop on Algorithmic Fairness through the Lens of Causality and Privacy: *poster session*; 2022 Comete Workshop on Ethical AI: *invited talk*; 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT): *doctoral colloquium*; 2022 European Workshop on Algorithmic Fairness (EWAf): *invited talk*.

PROFESSIONAL SERVICES

Organizer for the *Second European Workshop on Algorithmic Fairness (EWAf) 2023*; Program Committee for *ACM FAccT 2023*.

Reviewer for *NeurIPS 2023*, *ACM FAccT 2023*, *EWAf 2023*, *AFair-AMLD 2023*, *NeurIPS AFCP 2022*.

Sub-reviewer for *ECML-PKDD 2023*, *AISTATS 2023*, *TheWebConf 2023*, *UAI 2023*, *AISTATS 2022*, *TheWebConf 2022*, *Data Mining and Knowledge Discovery Journal 2022*, *AI*IA 2021*, *ECML-PKDD 2021*, *IJCAI 2021*, *UAI 2021*, *AISTATS 2021*.

FELLOWSHIPS, GRANTS, AND AWARDS

Marie Skłodowska-Curie Fellowship	2020 - 2023
Phi Beta Kappa	2015
University of Florida’s Honors Program	2015
Davis United Word College Scholar	2011 - 2015

SKILLS

Programming	Python, R, Scala
Other	Git, L ^A T _E X, Stata, SQL
Languages	Spanish (Native), English (Fluent), Italian (Fluent), French (Intermediate)