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 - Aug 2023
Visiting Research Scientist · *Wiesbaden, DE*

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

Generali · 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." *Forthcoming in ACM EAAMO*, 2023. [arXiv]

Carlos Mougan, **Jose M. Alvarez**, Salvatore Ruggieri, Steffen Staab. "Fairness implications of encoding protected categorical attributes." *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." [arXiv]

Jose M. Alvarez. "What's the Problem, Linda? The Conjunction Fallacy as a Fairness Problem." [arXiv]

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 (ICSDS): *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, LaTeX, Stata, SQL
Languages	Spanish (Native), English (Fluent), Italian (Fluent), French (Intermediate)