JOSE M. ALVAREZ

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

cc-jalvarez.github.io ⋄ Google Scholar ⋄ jose.alvarez@sns.it

EDUCATION

Ph.D. in Data Science   Nov 2020 - (Ex.) May 2024
Scuola Normale Superiore, Pisa, Italy

M.Sc. in Econometrics and Empirical Economics, *mention bien*   Sep 2015 - May 2017
Toulouse School of Economics, Toulouse, France

B.A. in Economics, History, *summa cum laude*   Sep 2011 - May 2015
University of Florida, Florida, USA

VISITS

Saarland University   Aug 2023
Machine Learning Group (Host: Isabel Valera)   Saarbrücken, DE

SCHUFA Holding AG   Jul - Aug 2023
Innovation & Research Team (Host: Klaus Broelemann)   Wiesbaden, DE

KU Leuven   Sep - Nov 2022
Department of Computer Science, DTAI Group (Host: Bettina Berendt)   Leuven, BE

Generali   Sep - Dec 2021
Advanced Analytics Team (Host: Antonio Bencini Farina)   Milan, IT

EXPERIENCE

Marie Skłodowska-Curie Early-Stage Researcher   Nov 2020 - Present
Department of Computer Science, KDD Lab, University of Pisa   *Pisa, IT*

· Early-stage researcher (ESR) with the *NoBIAS: Artificial Intelligence without Bias* Innovative Training Network, an interdisciplinary project funded by the European Union's Horizon 2020
· Collaborated continuously with the other 13 ESRs on a range of deliverables for the European Commission, such as a set of advisory reports and white papers, a book, and a testbed/code repository
· Co-organized the first NoBIAS Summer School in Pisa (40 participants) as well as co-led a project on policy advise and best practices for practitioners (paper under submission)

Senior Consultant – Operational & Financial Risk Modeler   May 2017 - Oct 2020
Deloitte   *Brussels, BE*

· Designed, developed, and deployed statistical machine learning models for clients in the energy & utilities and financial sectors
· Built an end-to-end time series forecasting tool (Clairvoyance) 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

Summer Economist   Jun - Aug 2016
Cabinet Office, UK Government   *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

(* shared first author)

Jose M. Alvarez, Salvatore Ruggieri. "Counterfactual Situation Testing: Uncovering Discrimination under Fairness given the Difference." *ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO)*, pages 1-11, 2023. [paper] [code]

Carlos Mougan, **Jose M. Alvarez**, Salvatore Ruggieri, Steffen Staab. "Fairness implications of encoding protected categorical attributes." *ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)*, pages 454–465, 2023. [paper] [code]

Jose M. Alvarez*, Kristen M. Scott*, Salvatore Ruggieri, Bettina Berendt. "Domain Adaptive Decision Trees: Implications for Accuracy and Fairness." *ACM Conference on Fairness, Accountability, and Transparency (FAccT)*, pages 423–433, 2023. [paper] [code]

Salvatore Ruggieri. **Jose M. Alvarez**, Andrea Pugnanna, Laura State, Franco Turini. "Can We Trust Fair-AI?" *AAAI Conference on Artificial Intelligence*, pages 15421–15430, 2023. [paper]

Matilde Lazzari, **Jose M. Alvarez**, Salvatore Ruggieri. "Predicting and explaining employee turnover intention." *International Journal of Data Science and Analytics*, 14(3):279–292, 2022. [paper]

WORKING PAPERS

"The Initial Screening Order Problem" with Salvatore Ruggieri, 17 pages. [arXiv]

"What's the Problem, Linda? The Conjunction Fallacy as a Fairness Problem", 21 pages. [arXiv]

PARTICIPATION

[**2023**] EAAMO: *doctoral colloquium*; ECML Workshop on Bias and Fairness in AI: *talk*.

[**2022**] International Conference on Statistics and Data Science: *poster*; NeurIPS Workshop on Algorithmic Fairness through the Lens of Causality and Privacy: *poster*; Comete Workshop on Ethical AI: *talk*; FAccT: *doctoral colloquium*; European Workshop on Algorithmic Fairness: *talk*.

SERVICES

Organizer for the *Second European Workshop on Algorithmic Fairness (EWAF'23)*.

Reviewer for *NeurIPS (2023-)*, *ACM FAccT (2023-)*, *ICLR (2023-)*.

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