

JOSE M. ALVAREZ

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EDUCATION

Scuola Normale Superiore

Nov 2020 - Present

Ph.D., Data Science

Advisor: Salvatore Ruggieri (University of Pisa)

Thesis: Topics in Causal Algorithmic Fairness

Toulouse School of Economics

Sep 2015 - May 2017

M.Sc., Econometrics and Empirical Economics, *magna cum laude*

University of Florida

Sep 2011 - May 2015

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

EXPERIENCE

University of Pisa

Nov 2020 - Present

Marie Skłodowska-Curie Early-Stage Researcher

Pisa, IT

- Early-stage researcher with NoBIAS: Artificial Intelligence without Bias Innovative Training Network (ITN), funded by the European Union's Horizon 2020
- The early-stage researcher position, or assegno di ricerca, is through the University of Pisa's Knowledge Discovery and Data Mining Laboratory (KDD Lab)
- Research visits to: SCHUFA Holding AG under the Innovation & Research team (Wiesbaden, DE, Jul-Aug 2023); KU Leuven under Prof. Bettina Berendt (Leuven, BE, Sep-Nov 2022); and Generali under the Advanced Analytics team (Milan, IT, Sep 2021-Jan 2022)

Deloitte

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 Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO)*, 22 pages, 2023. [arXiv]

Carlos Mougán, **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]

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]

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]

TALKS, POSTERS, AND WORKSHOPS

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

[2022] IMS 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: *presentation*; FAccT: *doctoral colloquium*; European Workshop on Algorithmic Fairness: *presentation*.

SERVICES

Organizer for the *Second European Workshop on Algorithmic Fairness (EWAf’23)*.

Reviewer for *NeurIPS* (2023-), *ACM FAccT* (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, L ^A T _E X, Stata, SQL
Languages	Spanish (Native), English (Fluent), Italian (Fluent), French (Intermediate)