

# JOSE M. ALVAREZ

Website: [cc-jalvarez.github.io](https://cc-jalvarez.github.io)

## CURRENT POSITION

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### Postdoctoral Researcher

Nov 2024 - Present

*Department of Computer Science, KU Leuven*

*Leuven, BE*

- Joint project between the Research Centre for Information Systems Engineering (LIRIS) and the Declarative Languages and Artificial Intelligence (DTAI) Section

## EDUCATION

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### Ph.D. in Data Science, *with distinction*

Nov 2020 - Jul 2024

*Scuola Normale Superiore, Pisa, Italy*

Thesis: Causality for Fair Machine Learning: Selected Topics and Applications

Advisor: Salvatore Ruggieri

Examiners: Joshua Loftus, Mykola Pechenizkiy

### M.Sc. in Econometrics and Empirical Economics, *with distinction*

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*

### International Baccalaureate

Sep 2009 - May 2011

*Lester B. Pearson United World College, B.C., Canada*

## EXPERIENCE

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### Marie Skłodowska-Curie Early-Stage Researcher

Nov 2020 - Oct 2024

*Department of Computer Science, University of Pisa*

*Pisa, IT*

- Early-stage researcher (ESR) with the [NoBIAS: AI without Bias ITN](#), an interdisciplinary research project funded by Horizon 2020
- Included two industry research visits to SCHUFA (Summer 2023) and Generali IT (Fall 2021), and one academic research visit to KU Leuven under Prof. Bettina Berendt (Fall 2022)

### Senior Consultant – Operational & Financial Risk Modeling

May 2017 - Oct 2020

*Risk Advisory, Deloitte*

*Brussels, BE*

- Designed, developed, and deployed statistical machine learning models for Benelux clients in the energy, utilities, and financial sectors
- Built an end-to-end time series forecasting tool at the [Deloitte aiStudio](#) in Frankfurt, DE, as the chosen Belgium representative

### 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

## AWARDS

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| <b>Best Reviewer</b> , International Conference on Machine Learning (ICML) | 2024        |
| <b>Borsa di Ricerca</b> , University of Pisa                               | 2023 - 2024 |
| <b>Marie Skłodowska-Curie Fellowship</b> , University of Pisa              | 2020 - 2023 |
| <b>Phi Beta Kappa</b> , University of Florida                              | 2015        |
| <b>Honors Program</b> , University of Florida                              | 2011 - 2015 |
| <b>Davis United Word College Scholar</b> , University of Florida           | 2011 - 2015 |
| <b>United Word College Scholarship</b> , Lester B. Pearson College         | 2009 - 2011 |

## PUBLICATIONS

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(\* shared first author)

1. **José M. Álvarez**, A. Mastropietro, and S. Ruggieri. The initial screening order problem. *CoRR*, abs/2307.15398, 2024. *Forthcoming in WSDM, 2025*. [[arXiv](#)] [[code](#)]
2. **J. M. Álvarez**, A. Bringas-Colmenarejo, A. Elobaid, S. Fabbriizzi, M. Fahimi, A. Ferrara, S. Ghodsi, C. Mougan, I. Papageorgiou, P. Reyero, et al. Policy advice and best practices on bias and fairness in AI. *Ethics and Information Technology*, 26(2):31, 2024. [[paper](#)]
3. **J. M. Álvarez** and S. Ruggieri. Counterfactual situation testing: Uncovering discrimination under fairness given the difference. In *EAAMO*, pages 2:1–2:11. ACM, 2023. [[paper](#)] [[code](#)]
4. **J. M. Álvarez\***, K. M. Scott\*, B. Berendt, and S. Ruggieri. Domain adaptive decision trees: Implications for accuracy and fairness. In *FAccT*, pages 423–433. ACM, 2023. [[paper](#)] [[code](#)]
5. C. Mougan, **J. M. Álvarez**, S. Ruggieri, and S. Staab. Fairness implications of encoding protected categorical attributes. In *AIES*, pages 454–465. ACM, 2023. [[paper](#)] [[code](#)]
6. S. Ruggieri, **J. M. Álvarez**, A. Pugnana, L. State, and F. Turini. Can we trust fair-AI? In *AAAI*, pages 15421–15430. AAAI Press, 2023. [[paper](#)]
7. M. Lazzari, **J. M. Álvarez**, and S. Ruggieri. Predicting and explaining employee turnover intention. *Int. J. Data Sci. Anal.*, 14(3):279–292, 2022. [[paper](#)]

## PREPRINTS

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1. J. M. Álvarez and S. Ruggieri. Causal perception. *CoRR*, abs/2401.13408, 2024. *Under preparation*. [[arXiv](#)]
2. J. M. Álvarez and S. Ruggieri. Mutatis Mutandis: Revisiting the comparator in discrimination testing. *CoRR*, abs/2405.13693, 2024. *Under submission*. [[arXiv](#)]
3. F. Palomba, A. Pugnana, J. M. Alvarez, and S. Ruggieri. A causal framework for evaluating deferring systems. *CoRR*, abs/2405.18902, 2024. *Under submission*. [[arXiv](#)]

## PARTICIPATION

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|   |          |
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| Invited speaker, Causality Reading Club, University of Pisa | Jul 2024 |
| Presentation, 3rd European Workshop on Algorithmic Fairness | Jul 2024 |
| Invited speaker, EAAMO Bridges, ALP Working Group           | May 2024 |
| Invited speaker, ASR Group, University of Oslo              | Nov 2023 |
| Poster, ACM EAAMO   | Oct 2023 |
| Doctoral colloquium, ACM EAAMO                              | Oct 2023 |

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| Presentation, ECML PKDD Workshop on Bias and Fairness in AI                    | Sep 2023 |
| Presentation, ACM FAccT  | Jun 2023 |
| Invited speaker, KDD Lab Seminar, University of Pisa                           | May 2023 |
| Poster, IMS International Conference on Statistics and Data Science            | Dec 2022 |
| Poster, NeurIPS Workshop on Algorithmic Fairness through the Lens of Causality | Dec 2022 |
| Invited speaker, 1st Comète Workshop on Ethical AI, Inria Polytechnique        | Sep 2022 |
| Doctoral colloquium, ACM FAccT   | Jun 2022 |
| Presentation, 1st European Workshop on Algorithmic Fairness                    | Jun 2022 |
| Invited speaker, NoBIAS Monthly Colloquium                                     | Oct 2021 |

## LEADERSHIP AND COMMUNITY SERVICE

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### Reviewer

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| <b>2025</b> | AISTAT  |
| <b>2024</b> | ACM FAccT, NeurIPS, EWAF, ICLR, ICML, ECML-PKDD, ACM AIES |
| <b>2023</b> | ACM FAccT, NeurIPS, EWAF, AFT Workshop                    |
| <b>2022</b> | AFCP Workshop   |

### European Workshop on Algorithmic Fairness (EWAF) 2022 -

- Area chair, and social media co-chair for [EWAF'24](#) (3rd edition)
- Co-organizer, social media chair, and sponsorship co-chair for [EWAF'23](#) (2nd edition)

### European Association for Algorithmic Fairness (EAAF) 2023 -

- Co-founder of [EAAF](#), which organizes EWAF, and member of the inaugural board

## SKILLS

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| <b>Software</b>  | Python, R, $\text{\LaTeX}$ , Git   |
| <b>Languages</b> | Spanish (Native), English (Bilingual), Italian (Fluent), French (Intermediate) |

## PERSONAL

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| <b>Interests</b>     | Football, Drums, Reading |
| <b>Nationalities</b> | Venezuelan, Italian      |

Last updated: October 24, 2024