

Francesco Fabbri

Third year Ph.D. student at Pompeu Fabra University, Barcelona, supported by the Vicente López scholarship, awarded by Eurecat, Research Center in Catalunya. His work focuses on analyzing and mitigating unintended and potentially harmful effects embedded in online social platforms (e.g. social networks, music streaming platforms or rental marketplaces). He obtained a Master's Degree in Data Science and a Bachelor's Degree in Statistics from Sapienza University, Rome.

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CURRENT POSITION

- **Ph.D. Student** Oct 2018 – Present
Pompeu Fabra University (Web Science and Social Computing) [Barcelona, Spain]
I'm Ph.D. Student in Algorithmic Fairness, with a focus on Recommender Systems, luckily advised by Dr. Francesco Bonchi and Prof. Carlos Castillo. During my studies I had the opportunity to: i) analyzing unfairness in exposure on social networks, ii) assessing disparate treatment on rental marketplace and music streaming platforms, iii) devising fair method to include fairness constraints on streaming data.
- **Junior Researcher** Oct 2018 – Present
Eurecat (Data Science and Big Data Analytics unit) [Barcelona, Spain]
I've carried research on Algorithmic Fairness and Responsible AI. I'm consistently involved in both private and European projects (Horizon 2020), mainly in the areas of Recommender Systems and Social Network Analysis. I have also advised two Master students and one Bachelor students.

PREVIOUS POSITIONS

- **Research Intern** Aug 2020 – Dec 2020
University of Helsinki (Department of Computer Science) [Helsinki, Finland]
I spent the summer as intern in the Algorithmic Data Science research group, working with Prof. Michael Mathioudakis. I have been working on: (i) fair algorithms for data stream applications; (ii) responsible recommendation strategies in video streaming platforms.
- **Research Intern** Aug 2016 – Dec 2016
Eurecat (Data Science and Big Data Analytics unit) [Barcelona, Spain]
I spent the summer as intern in the Data Science group, working with Carlos Castillo and Diego Saez-Tramper. I have been working on: (i) analyzing social media data from Facebook; (ii) understanding long-term effects of social media posting activity.

EDUCATION

- **Ph.D. in Computer Science** Oct 2018 – Present
Pompeu Fabra University (Web Science and Social Computing) [Barcelona, Spain]
Supervised by Prof. Carlos Castillo and Dr. Francesco Bonchi.
- **Master in Data Science (magna cum Laude)** Oct 2015 – Sep 2018
Sapienza, University of Rome (Department of Computer Science) [Rome, Italy]
- **Bachelor in Statistics** Oct 2011 – Dec 2014
Sapienza, University of Rome (Department of Statistics) [Rome, Italy]

PUBLICATIONS

1. **Fabbri F.**, Mathioudakis, M., F. Bonchi, and C. Castillo, "Mitigation Strategies for Harmful Effects on Video Recommendation Platforms", *Ongoing Work*
2. Ariza A., **Fabbri F.**, Boratto L., Salamò M. "From The Beatles to Billie Eilish: Connecting Provider Representativeness and Exposure in Session-based Recommender Systems", In *Proceedings of the European Conference of Information Retrieval. ECIR 2021*
3. Wang, Y., **Fabbri, F.**, Mathioudakis, M. Fair and "Representative Subset Selection from Data Streams". In *Proceedings of the World Wide Web Conference. TheWebConf 2021*.
4. **F. Fabbri**, F. Bonchi, L. Boratto, and C. Castillo, "The effect of homophily on disparate visibility of minorities in people recommender systems," in *Proceedings of the Fourteenth International AAAI Conference on Web and Social Media, ICWSM 2020*, AAAI Press, 2020, pp. 165–175.

HONORS AND AWARDS

1. *ACM Travel Grant*. Travel support at the HUMAINT Winter School 2020.
2. *Full Grant Scholarship @ Pi-School*. Awarded with a full grant to participate the 8 weeks study program in Artificial Intelligence at Pi School, Rome.
3. *Research Fellowship*. Performing data analysis on bibliometric data, at Sapienza, University of Rome

TEACHING AND INVITED TALKS

- **Talk: Disparate Visibility in Social Networks** 2020
Invited Talk @ Fair February Initiative (Brown University) [Virtual]
- **Course: Information Retrieval and Web Applications** 2020
Teaching Assistant (Pompeu Fabra University) [Barcelona, Spain]

PROJECTS

- **EU H2020 - DIAMOND** 2019 – Present
Junior Researcher involved in the social network analysis focused on “Revealing fair and actionable knowledge from data to support women’s inclusion in transport systems (DIAMOND)”, of the Horizon 2020 programme
- **EU H2020 - EURYKA** 2019
Junior Researcher performing data analysis related to “ Reinventing Democracy in Europe: Youth Doing Politics in Times of Increasing Inequalities (EURYKA)”, of the Horizon 2020 programme
- **Session-Based RecSys in e-commerce** 2019
Data Scientist implementing session-based recommendation algorithms based on deep learning solution, in order to include next-item suggestions in a mobile application for a popular e-commerce marketplace.
- **External Consultant - Bambino Gesù Pediatric Hospital** 2018-2019
Data Scientist consultant helping pediatricians and epidemiologists to study spread of misinformation around vaccine hesitancy on social media platforms (e.g. Twitter, Reddit and Wikipedia).

ACADEMIC SERVICE

Program Committee (PC) Member

PC Member of RecSys (2020), ECML-PKDD (2020). BIAS Workshop @ ECIR (2019, 2020)

TECHNICAL SKILLS AND RESEARCH INTERESTS

1. **Programming** Python, R, SQL,
2. **Framework** Keras, Numpy, Pandas, PyTorch, Scipy, Scikit-Learn, Apache Spark
3. **Research Focus** algorithmic fairness, information retrieval, machine learning, recommender systems