

# Fabio Mercorio<sup>1</sup>

**Research Interests.** His research interests include: *Artificial Intelligence*: eXplainable AI, interpretable models, local and global interpretation, explanation through symbolic approaches, Labour Market Intelligence; *Data Science*: data quality and data cleaning, vector-space models, taxonomy refinement, Graph-database algorithms; *AI Planning [formerly]*: domain-independent planning, temporal continuous planning.

**Current Positions.** ▶ *mar 2024 - present*: Full Professor in Computer science, University of Milano-Bicocca, Italy. ▶ *2022 - present*: Director of Master in BI and Big Data Analytics, University of Milano-Bicocca, Italy.

**Past Positions.** ▶ *2020 - feb 2024*: Associate Professor in Computer science, University of Milano-Bicocca, Italy. ▶ *2020 - 2023*: Deputy Director of CRISP Research Centre, Unimib. ▶ *2016 - 2020*: Assistant Professor in Computer science at DISMEQ-Unimib; ▶ *2011 - 2016*: PostDoc in Computer science at DISMEQ-Unimib; ▶ *2015 - 2016*: Visiting researcher in AI Planning at King's College London, Department of Informatics, London, UK;

**Education.** ▶ *2012*: PhD in Computer Science and Applications Dept of Computer Science, University of L'Aquila, Italy. Topics: Planning as Model Checking.

**Teaching.** ▶ *2020 - present*: *eXplainableAI* at PhD in Data Science for Business - University of Milano-Bicocca; ▶ *AI and Big Data Analytics* at Master Degree in Data Science - University of Milano-Bicocca.

**Research Grants and Awards** ▶ [2019] Research Talent Award I've received the first prize at the [YoungTalentAward](#) 2019 in collaboration with Accademia Nazionale Lincei in the Computer Science, Engineering & Mathematics area. "*for his contribution on applying AI to labour market for describing and predicting labour market phenomena*";

## Services in Academia

- ▶ Reviewer for (selection of Journals): Artificial Intelligence, Applied Soft Computing, Future Generation Computer System, Knowledge-Based Systems, Computers in Industry, Expert Systems with Applications
- ▶ Reviewer for (selection of top-notch conferences): AAAI; ACL, NAACL; EMNLP; IJCAI; CIKM; ECML/PKDD
- ▶ Guest Editor of "Special Issue on Granular Computing for XAI", Cognitive Computation (2024)

**Research Projects (selection. Only last 5 years) on Big Data Analytics, AI and XAI** He has been involved in the following granted projects by applying his AI competencies.

- ▶ **2020-ongoing. EUROSTAT** "Towards the European Web Intelligence Hub — European System for Collection and Analysis of Online Job Advertisement Data (WIH-OJA)" Apply AI and XAI to reason over a million vacancies in the EU. Head of Research Unit
- ▶ **2023-ongoing. ISALDI: Interpretable Stock Analysis Leveraging Deep Multimodal Models.** The project aims to leverage various data sources, including social media data, news, events, market data, and company data, treating them as multivariate time series to provide market operators with reliable and timely forecasts on financial market trends, thanks to machine learning and explainable AI. Co-PI
- ▶ **2022-ongoing. ETF Big Data Analytics for Labour Market Intelligence** commissioned by ETF (The European Training Foundation). Co-PI
- ▶ **2020-2024. H2020-SC6-TRANSFORMATIONS-2020** "PILLARS: Pathways to inclusive labour market" Apply AI and XAI to mitigate skill mismatch, see <https://www.h2020-pillars.eu/>. Head of Unimib Unit
- ▶ **2016-2020. CEDEFOP** "Real-time Labour Market information on Skill Requirements: Setting up the EU system for online vacancy analysis" CEDEFOP (European Centre for the Development of Vocational Training). Realise an Online Job Vacancy real-time monitor for all the 27+1 EU countries. Head of Research Unit
- ▶ **The Observatory of Digital Competences (2016,2017,2018 and 2019)** Granted by the Italian Unions of ICT (Assinform, Assintel, Assinter) with support of AgiD (Agenzia Italia Digitale) and MIUR. Measuring the pervasiveness of digital skills within occupations derived from the Web Italian Labour Market.
- ▶ **2020-2022. AI4ESCO** "A Data Driven Bridge Towards ESCO using AI Algorithms". Granted by EURES (call EaSI-EURES VP/2019/010). Realising a mapping-table allowing for matching job vacancies and CVs in the European Job Mobility Portal. Specifically, AI4ESCO employs AI algorithms (word-embeddings ) to derive a machine-readable structure of the lexicon used within the Italian National Occupation Taxonomy (CP2011). Head of Research Unit
- ▶ **(2020-2021) Cybersecurity Labor Market Analysis through automatic job ads analysis.** The goal was to (i) develop taxonomy enrichment and distributional semantics to identify the presence of cybersecurity skills in millions of job postings across 5 European countries; (ii) define a data-driven taxonomy of cybersecurity skills through the use of word embeddings. PI

**Spin-off.** Until 2018, he was a Partner at TabulaeX Ltd (formerly a spin-off company of Unimib), working on AI and Big Data Analytics. TabulaeX is now LightCast applying AI/XAI to Skill Intelligence.

**Publications.** He co-authored 100+ papers since 2009 - <https://boa.unimib.it/browse?type=author&authority=rp04342>

Fabio Mercorio <http://www.mercorio.com>

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<sup>1</sup>Update May 2024 - I authorise the processing of my personal information according to D.Lgs. 196/03.