Fabio Mercorio[1]

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 AIDA - Master in AI and Data Analytics - `aidamasterbicocca.it`
▶ *sept 2024 - present*: Deputy Director of Department of Statistics and Quantitative Methods.

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, Dept 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 (University). He taught the following courses at the University of Milano-Bicocca:
▶ *eXplainableAI* at PhD in Data Science for Business (since 2020 to present);
▶ *BI and Big Data Analytics* at Master Degree in Data Science (since 2020 to present);
▶ *Databases* at Bachelor Degree in Statistics (since 2018 to present);
▶ *Data Processing and Analysis* at Bachelor Degree in Statistics (since 2021 to present);
▶ *Big Data Analytics* at Master Degree in Biostatistics (since 2021 to present);
▶ *Informatics* at Master Degree in Statistics (since 2012 to 2018);

Teaching (in Advanced and Higher Education for companies and organisations). He taught the following courses in Big Data Analytics and AI for:
▶ master in BI and Big Data Analytics `bimasterbicocca.it` (since 2012 to 2023);
▶ master in AI and Data Analytics `aidamasterbicocca.it` (since 2024 to present);
▶ companies and organisations working in sectors such as Finance, Banking, Insurance, and Manufacturing (since 2014 to present)

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"*;

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

▶ **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

▶ **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`