Davide Coppes

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ABOUT ME

I currently work as an AI Specialist in a R&D team, where I leverage my expertise in data analysis and predictive modeling to tackle complex challenges in Generative AI. I have a background in Physics of Complex Systems, with a specialization in Network and Data Science, which provides me with a strong theoretical and practical foundation. I am passionate about Artificial Intelligence and Data Science, and I am driven to apply my skills to create impactful, cutting-edge technologies.

WORK EXPERIENCE

AI Specialist

MESA [2 Sep 2024 – Current]

- Started the R&D team.
- Improved RAG flow for legal documents and corporate policies.
- Invented a flow to answer global questions on a set of documents.

Junior AI Specialist

MESA [6 May 2024 – 2 Sep 2024]

- Prompt Engineering
- Azure AI Services
- Lidia (Vectis)

Visiting Researcher

CENTAI [16 Jan 2024 – 17 Apr 2024]

- Analysis, interpretation and visualisation of data from financial time series and brain activity.
- Use of information theory metrics to detect periods of financial crisis or abnormal brain activity.

EDUCATION AND TRAINING

M.Sc. Physics of Complex Systems

University of Turin [17 Apr 2024]

Final grade: 110 Cum Laude/110 ｜ **Thesis:** Measures of higher-order information theory in signal processing

Erasmus+ for Traineeship

Central European University [28 Aug 2023 – 23 Dec 2023]

B.Sc. Physics

University of Turin [11 Nov 2021]

Final grade: 108/110 ｜ **Thesis:** Effects of random and targeted attacks on the fine structure of networks

PUBLICATIONS

[2024]

Synergistic signatures of group mechanisms in higher-order systems
This paper aims to explore the correlation between higher-order behaviors - emergent properties of a system - and higher-order mechanisms - the complex rules governing the system's formation.

arXiv

[2023]
A machine-learning procedure to detect network attacks
The goal is to assess whether simple machine learning algorithms can be used to determine whether and how a given network has been attacked without requiring the knowledge of the structure of the network before the attack.

Journal of Complex Networks

SCIENTIFIC DISSEMINATION

[18 May 2023]
Introduction to Network Science

Introductory course aimed at the 3rd and 5th year classes of the "G. F. Porporato" high school with a view to strengthening scientific disciplines, with particular attention to the multidisciplinary approach.

DIGITAL SKILLS

Programming languages
Python / C++

AI Tools
Azure / OpenAI / Hugging Face / neo4j

LANGUAGE SKILLS

Mother tongue(s): Italian
Other language(s): English | French

HOBBIES AND INTERESTS

Creative Writing
I have participated in various creative writing competitions for short stories.

Winner: "Weltbilden - Visioni del mondo", La Scienza Narrata, 2017.

Runner-up: "Odissea della scelta", Scienza Fantastica, 2021.

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19 Jan 2025

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