# **Federico Borazio**

## **CONTACTS**

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Second-year Ph.D. Student in Data Science at the *University of Rome Tor Vergata* (<a href="https://datasciencephd.uniroma2.it/">https://datasciencephd.uniroma2.it/</a>) and active member of the Semantic Analytics Group (<a href="http://sag.art.uniroma2.it/">https://sag.art.uniroma2.it/</a>). My research focuses on Deep Learning and Natural Language Processing, with a special interest in Generative AI, Knowledge Discovery in the medical domain, Knowledge Injection in Large Language Models (LLMs), and Vision-Language Understanding.

## **EDUCATIONAL BACKGROUND**

Master's degree, University of Rome, Tor Vergata

Macro Area of Science – Department of Enterprise Engineering

Computer Science

Rome, Italy 01/2020-10/2023

Thesis: "Exploring Neural Foundation Models with Sustainable Methods for Information

Extraction in the Medical Domain" Final Grade: 110/110 with Honors

## **PROFESSIONAL EXPERIENCE**

Al Project Consultant Reveal S.r.l.

Rome, Italy 2024-present

#### **PROJECTS**

"Matchmaking for Innovation" 2025

Development of a semantic search engine to match technological and innovative challenges with academic research groups and industry projects.

- o Collaboration with: Foundation Rome Technopole
- "Italian Network of Epidemic Intelligence" 2024

Development of new monitoring tools for pandemic events, using Natural Language Processing and Machine Learning techniques for the automatic analysis of online information.

- o Collaboration with: Italian Public Ministry of Health, and Istituto Superiore di Sanità (ISS)
- "Simple Knowledge Organization Systems for the Decommissioning of Nuclear Facilities" 2024
   Development of semantic search engine in the Context of Knowledge Management for Nuclear Decommissioning.
  - Collaboration with: International Atomic Energy Agency (IAEA)

## **ACADEMIC ACTIVITIES**

### RECENT SCIENTIFIC PUBLICATIONS

- "Training Multi-Modal LLMs through Dialogue Planning for HRI"
   CD Hromei, F Borazio et al. Findings of the Association for Computational Linguistics: ACL 2025, Wien
- "Adapting LLMs for Domain-Specific Retrieval: A Case Study in Nuclear Safety",
   F Borazio, D Croce, R Basili European Conference on Information Retrieval, 2025, Lucca
- "CALAMITA: Challenge the Abilities of LAnguage Models in ITAlian"
   in Proceedings of the 10th Italian Conference on Computational Linguistics, 2024, Attanasio et al., Pisa
- "MM-IGLU-IT: Multi-modal Interactive Grounded Language Understanding in Italian"
   in International Conference of the Italian Association for Artificial Intelligence, 2024, Borazio et al., Bolzano
- "Semi-Automatic Topic Discovery and Classification for Epidemic Intelligence via Large Language Models" in Proceedings of the Second Workshop on Natural Language Processing for Political Sciences
   @ LREC-COLING 2024, Borazio et al., Turin



#### **TEACHING ASSISTANT**

- Deep Learning, Master's Degree Program, University of Rome Tor Vergata (2024,2025)
- Fundamentals of Computing, bachelor's degree Program, University of Rome Tor Vergata (2024)
- Computer Programming, bachelor's degree Program, University of Rome Tor Vergata (2022,2023)

## **REGULAR PAPER REVIEWER**

 Active reviewer for several venues, including the AlxIA satellite workshops NL4AI, the IJCOL journal, the EMNLP conference, The Web Conference, and CLiC-it conference

#### **EDUCATIONAL EXPERIENCES**

- ESSAI & ACAI 2024 European Summer School on Artificial Intelligence & Advanced Course on Artificial Intelligence - National Centre for Scientific Research "Demokritos", Athens
  - Attendee
- LECTURES 2024 AILC Lectures on Computational Linguistics Università degli Studi di Bari Aldo Moro, Bari
  - Attendee and Student Session presentation

## **OTHER ACTIVITIES**

- CALAMITA Challenge the Abilities of Language Models in ITAlian Special event co-located with the Tenth Italian Conference on Computational Linguistics CLiC-it 2024, *Pisa* 
  - Data and Evaluation Team member
- Private Tutoring Provided freelance tutoring to university students from Tor Vergata and Sapienza in courses related to Management Engineering, Statistics, and Languages in the Information Society, with a focus on Programming, Algorithms and Data Structures, Databases, and Computer Science Fundamentals. – 2018-2021, Rome

## **LANGUAGES**

Italian: Native speaker

English: B1 CEFR Certification | Professional proficiency

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