Federico Borazio

Contacts

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BIO

Second-year Ph.D. Student in Data Science at the *University of Rome Tor Vergata* (https://datasciencephd.uniroma2.it/) and active member of the Semantic Analytics Group (http://sag.art.uniroma2.it/). 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 **Rome, Italy**
Computer Science 01/2020-10/2023
Thesis*: "Leveraging Neural Foundational Models with Sustainable Methods for Information Extraction Problems in the Medical Domain"*
Final Grade*:* 110/110 with Honors

CURRICULAR 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*
- "*Intelligent Natural Language Processing for Epidemic Intelligence"*
  in JCoL. Italian Journal of Computational Linguistics, 2023, Croce, Borazio et al.

UNIVERSITY TEACHER 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)

PROJECTS

- "*Italian Network of Epidemic Intelligence*" 2023-2024
  Development of new monitoring tools for pandemic events, using Natural Language Processing and Machine Learning techniques for the automatic analysis of online information.
  - 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)*

REGULAR PAPER REVIEWER

- Active reviewer for several venues, including the AIxIA 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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