

PERSONAL INFORMATION

Giacomo Frisoni



📍 Via dell'Università, 50, 47522 Cesena (FC), Italy

☎ +39 331 2718059

✉ giacomo.frisoni@unibo.it

Other references

- *Websites:* [Personal](#), [Academic](#)
- *Research and academy:* [ORCID](#), [DBLP](#), [Google Scholar](#), [Semantic Scholar](#), [Scopus](#), [UniboNLP Research Group](#)
- *Development:* [Personal GitHub](#), [Personal BitBucket](#), [Research Group GitHub](#)
- *Social:* [LinkedIn](#)

Gender M | Birth date November 18, 1995 | Nationality Italian

Languages Italian (mother tongue), English (B2 level)

SHORT BIO

Giacomo Frisoni, Ph.D., is a postdoctoral researcher in Computer Science and Engineering at the University of Bologna. His research interests lie in Natural Language Processing, Large Language Models, and Graph Neural Networks, particularly for medical applications. He has co-authored over 25 papers in prestigious conferences and journals, including ACL, NAACL, EMNLP, and AAAI, receiving two best paper awards. He has actively contributed to the research community by serving in various scientific roles, including session chair, program committee member, student ambassador, editorial board member, and workshop organizer for many international venues. He has collaborated with esteemed academic and industrial institutions, including the Information Retrieval Group at the University of Glasgow, IBM, and EURECOM. As for teaching, he served as a contract professor and tutor for two AI courses at the University of Bologna, co-supervising over 45 theses.

EDUCATION

Oct 2020 – Jan 2024
Cesena (FC), Italy

Ph.D., Computer Science and Engineering

Department of Computer Science and Engineering, University of Bologna

- Ministerial scholarship
- Supervisor: Gianluca Moro
- Tutors: Antonella Carbonaro, Ilaria Bartolini
- Thesis topic: Knowledge-Enhanced Natural Language Processing
- Graduation score: 5/5 (Excellent)
- Areas of study: Knowledge Extraction from Text, Semantic Parsing, Large Language Models, Graph Neural Networks, Retrieval-Augmented Generation, Knowledge Injection

Sep 2017 – Mar 2020
Cesena (FC), Italy

M.S., Computer Science and Engineering

University of Bologna

- Cumulative GPA: 4.0 ([transcript](#))
- Graduation score: 110/110 cum Laude
- Graduation class: Computer Engineering
- Thesis topic: [A new unsupervised methodology of descriptive text mining for knowledge graph learning](#)
- Supervisor: Gianluca Moro
- Co-Supervisor: Antonella Carbonaro
- Area of study: Text Mining

Sep 2014 – Oct 2017
Cesena (FC), Italy

B.S., Computer Science and Engineering

University of Bologna

- Cumulative GPA: 4.0 ([transcript](#))
- Graduation score: 110/110 cum Laude
- Graduation class: Computer Engineering

- Thesis topic: [Design and development of a software system for studying and researching rare diseases](#)
 - Supervisor: Dario Maio
 - Areas of study: Databases, Microsoft Azure
- Sep 2009 – Jul 2014
Rimini (RN), Italy
- Scientific High School**
ITIS Leonardo Da Vinci

- Final score: 100/100 cum Laude
- Member of the National Register of Excellence
- Focus on C# and Cryptography (Bletchley Park Visitor)

WORK EXPERIENCE

Feb 2024 – Now
Cesena (FC), Italy

Post-doctoral Researcher

Department of Computer Science and Engineering, University of Bologna

- Area of study: Large Language Models in health domains
- Supervisor: Claudio Sartori
- Research grant by DARE (Digital Lifelong Prevention)

09/2022 – 12/2022
Glasgow, Scotland

Postgraduate Visiting Researcher

Terrier Team, [Information, Data & Analysis Section](#), School of Computing Science, University of Glasgow

- Supervisor: Zaiqiao Meng
- Area of study: Dense Subgraph Retrieval for Open-Domain Biomedical Question Answering

PARTICIPATION IN RESEARCH GROUPS

Mar 2020 – Now

UniboNLP Research Group

The primary research group I worked with since my M.S. degree. The UniBoNLP group—led by Prof. Gianluca Moro—includes a team of Post Docs, Ph.D. students, and faculty members who are part of the Department of Computer Science and Engineering of the University of Bologna, Italy. We develop innovative state-of-the-art deep learning solutions, with a focus on Natural Language Processing. Our group has a long-time experience in high-social impact domains such as medicine and law, counting more than 50 publications in the last 5 years. We follow innovative trends, including large language models, graph neural networks, end-to-end differentiability, agents, deep metric learning, knowledge injection, prompt learning, explainable AI, sparse autoencoders, neuro-symbolic AI. From April 2023, I co-manage the research group's SLURM cluster.

TEACHING ACTIVITIES

Academic Year 2024 – 2025
Academic Year 2023 – 2024

Contract Professor

Bologna Business School

- Text Mining and Natural Language Processing
- International Master in Data Science and Business Analytics

Academic Year 2024 – 2025
Academic Year 2023 – 2024

Tutor

University of Bologna

- Big Data Analytics and Text Mining [cod. B2133]
- Data Mining, Text Mining and Big Data Analytics [cod. 91262]
- M.S. Course, Artificial Intelligence

2020 – Now

Thesis Co-Supervisor

University of Bologna

- Co-Supervision of 43 Bachelor and Master Students on Natural Language Processing topics
- [AMS Laurea Full List](#)

RESEARCH PROJECTS

2024 – 2026

DARE – Digital Lifelong Prevention [cod. PNC0000002]

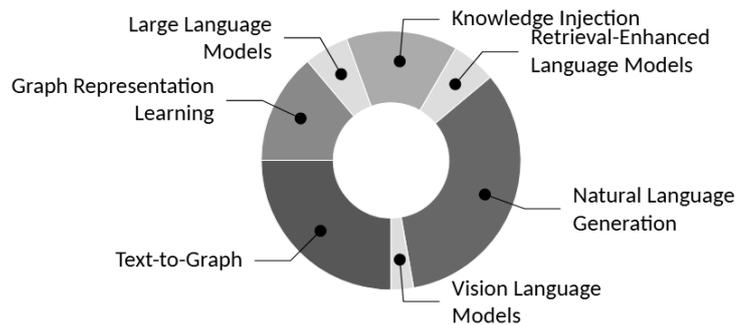
Project funded by the Italian Ministry of Universities and Research as part of the National Plan for Complementary Investments to the National Recovery and Resilience Plan. It strives to unlock the potential of data for enhancing health promotion and prevention. Total project funding: €124,000,000. Proposer: University of Bologna.

SCIENTIFIC PUBLICATIONS

Overall

Author of 24 papers. Citations: 438, h-Index: 14 (Google Scholar metrics as of June 23, 2025). [Complete list.](#)

The main keywords and research areas are listed below. Class and rating scores for conferences are determined through the [GII-GRIN-SCIE \(GGS\)](#) initiative, while journals' Best Quartile rankings are derived from the [SCImago Journal Rank \(SJR\)](#) indicator. Statistics refer to publication time.



Selected Contributions in Conference Proceedings

OpenBioNER: Lightweight Open-Domain Biomedical Named Entity Recognition Through Entity Type Description (A)

A. Cocchieri, [G. Frisoni](#), M. M. Galindo, G. Moro, G. Tagliavini, F. Candoli. NAACL 2025.

Unknown Claims: Generation of Fact-Checking Training Examples from Unstructured and Structured Sources (A*)

L. Ragazzi, J. F. Bussotti, [G. Frisoni](#), G. Moro, P. Papotti. EMNLP 2024.

To Generate or To Retrieve? On the Effectiveness of Artificial Contexts for Medical Open-Domain Question Answering (A*)

[G. Frisoni](#), A. Cocchieri, A. Presepi, G. Moro, Z. Meng. ACL 2024.

Cogito Ergo Summ: Abstractive Summarization of Biomedical Papers via Semantic Parsing Graphs and Consistency Rewards (A*)

[G. Frisoni](#), P. Italiani, S. Salvatori, G. Moro. AAAI 2023.

BioReader: A Retrieval-Enhanced Text-to-Text Transformer for Biomedical Literature (A*)

[G. Frisoni](#), M. Mizutani, G. Moro, L. Valgimigli. EMNLP 2022.

Text-to-Text Extraction and Verbalization of Biomedical Event Graphs (B)

[G. Frisoni](#), G. Moro, L. Balzani. COLING 2022.

Selected Contributions in Journals

Lawsu-IT: A Large Expert-Written Summarization Dataset of Italian Constitutional Court Verdicts (Q1)

L. Ragazzi, G. Moro, S. Guidi, [G. Frisoni](#). Artificial Intelligence and Law 2024.

Evidence, my Dear Watson: Abstractive Dialogue Summarization on Learnable Relevant Utterances (Q1)

P. Italiani, [G. Frisoni](#), G. Moro, A. Carbonaro, C. Sartori. Neurocomputing 2024.

Efficient Text-Image Semantic Search: A Multi-Modal Vision-Language Approach for Fashion Retrieval (Q1)

G. Moro, S. Salvatori, [G. Frisoni](#). Neurocomputing 2023.

Efficient Memory-Enhanced Transformer for Long-Document Summarization in Low-Resource Regimes (Q1)

G. Moro, L. Ragazzi, L. Valgimigli, G. Frisoni, C. Sartori, G. Marfia. Sensors 2023.

Unsupervised Event Graph Representation and Similarity Learning on Biomedical Literature (Q1)

G. Frisoni, G. Moro, G. Carlassare, A. Carbonaro. Sensors 2021.

A Survey on Event Extraction for Natural Language Understanding: Riding the Biomedical Literature Wave (Q1)

G. Frisoni, G. Moro, A. Carbonaro. IEEE Access 2021.

SCIENTIFIC ACTIVITIES

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|--------------------------------|--|
| Workshop Organization (Chair) | <ul style="list-style-type: none"> ▪ Co-Organizer of the Knowledge-Enhanced Information Retrieval Workshop. First Edition (ECIR 2024). Second Edition (ECIR 2025). |
| Session Chair | <ul style="list-style-type: none"> ▪ DATA 2022, Lisbon, Portugal, Virtual Session 1A “Neural Network Applications”. Certificate. |
| Reviewing for Conferences | <ul style="list-style-type: none"> ▪ ACL ARR 2025 May ▪ European Conference on Artificial Intelligence, ECAI 2025; GGS Rating: A ▪ ACL ARR 2025 February ▪ ACL ARR 2024 December ▪ ACL ARR 2024 October ▪ International Conference on Learning Representations, ICLR 2025; GGS Rating: A* ▪ ACL ARR 2024 August ▪ Neural Information Processing Systems, NeurIPS 2024, Datasets and Benchmarks Track; GGS Rating: A* ▪ European Conference on Information Retrieval, ECIR 2024; GGS Rating: A ▪ Association for the Advancement of Artificial Intelligence, AAAI 2024; GGS Rating: A* ▪ ACL ARR 2024 June ▪ ACL ARR 2024 February ▪ International Conference on Learning Representations, ICLR 2024; GGS Rating: A* ▪ ACL ARR 2023 December ▪ Extended Semantic Web Conference, ESWC 2023; GGS Rating: B ▪ International Semantic Web Conference, ISWC 2023; GGS Rating: A ▪ Neural Information Processing Systems, NeurIPS 2023; GGS Rating: A* ▪ Association for the Advancement of Artificial Intelligence, AAAI 2023; GGS Rating: A* |
| Reviewing for Journals | <ul style="list-style-type: none"> ▪ Engineering Applications of Artificial Intelligence, 2023; Q1 ▪ MDPI Information, 2023; Q2 ▪ Semantic Web Journal, 2022; Q2 ▪ Expert Systems, 2022; Q2 ▪ MDPI Applied Sciences, 2022; Q2 |
| Journal Editorial Board Member | <ul style="list-style-type: none"> ▪ Engineering Applications of Artificial Intelligence, 2023; Q1 |
| Invited Talks | <ul style="list-style-type: none"> ▪ Knowledge-Enhanced NLP: From Retrieval Augmentation to Generative Augmentation in Medical Domains. Eurecom. April 9, 2024. ▪ Retrieval-Enhanced Language Models and Semantic-Driven Summarization for Biomedical Domains. TerrierTeam. University of Glasgow. October 10, 2022. |
| Relevant Program Attendance | <ul style="list-style-type: none"> ▪ Advanced Course on Data Science and Machine Learning, ACDL 2024. Tuscany, Italy. Certificate. ▪ 1st Workshop on Knowledge-Enhanced Information Retrieval. ECIR 2024. Glasgow. ▪ Oxford Machine Learning School, OxML 2023. Andrew Wiles Building, Mathematical Institute, University of Oxford. I was one of the worldwide students selected to participate in person at the OxML School 2023, organized by AI for Global Goals, sponsored by Takeda and DeepMind. Certificate. ▪ EMNLP 2022, Abu Dhabi, United Arab Emirates. In-person presentation of the paper “BioReader: A Retrieval-Enhanced Text-to-Text Transformer for Biomedical Literature”. Certificate. ▪ The Cornell, Maryland, Max-Planck Pre-doctoral Research School, CMMRS 2020. Max Planck Institute for Software Systems (Virtual). I was granted the opportunity to be one of ~100 students internationally selected to participate in the CMMRS 2020, Saarbrücken, Germany. Certificate. |

ACHIEVEMENTS, HONORS,
AND AWARDS

- Jul 2022 **Best Student Paper Award**
 In 2022, my co-authored paper "[Enhancing Biomedical Scientific Reviews Summarization with Graph-based Factual Evidence Extracted from Papers](#)" has been selected as the best contribution at DATA (20% acceptance rate, double-blind peer review), resulting in a Springer extension. [HYPERLINK](#) "https://drive.google.com/file/d/1MtTjo3i6yjkBCuKZUNy4Mom5HwKYto/view?usp=sharing"Certificate..
- Feb 2021 **Con.Scienze 2020 Award**
 National award—with only one nomination per university department—from the Italian Conference of the Presidents and Directors of Science and Technology for having written one of the ten best scientific research works during the master's thesis. [Source](#).
- Jul 2020 **PhD Call First Position**
[First position in the ranking out of 132 participants](#) for the PhD call in Computer Science and Engineering, University of Bologna.
- Mar 2020 **Best Paper Award**
 In 2020, my first co-authored paper "[Learning Interpretable and Statistically Significant Knowledge from Unlabeled Corpora of Social Text Messages: A Novel Methodology of Descriptive Text Mining](#)" has been selected as the best contribution at DATA (14% acceptance rate, double-blind peer review), resulting in Springer extension. [Certificate](#).

 SKILLS

 Software & Tools for
[DevOps](#) and LLMOps

- **Coding languages:** Python, R, Scala, Java, C#, Bash, Prolog
- **Deep Learning framework:** PyTorch, PyTorch Geometrics, TensorFlow, Keras, Jax/Flax
- **NLP development:** Transformers, Evaluate, Datasets, (Sci)Spacy, PEFT, Smolagents, Ollama, LMStudio, LangGraph, Llamaindex, Fastchat
- **Closed-source LLM APIs:** OpenAI, Anthropic, Google Gemini
- **Vector databases:** Milvus, Weaviate
- **Version control system:** Git, BitBucket
- **Experiment tracking and monitoring:** Weights & Biases, Tensorboard
- **Distributed training:** RunPod
- **Containerization:** Docker
- **Cluster management:** Slurm
- **Cloud deployment and model serving:** Microsoft Azure, AWS, HuggingFace
- **CI/CD:** Databricks, Azure DevOps
- **Dissemination:** LaTeX (Overleaf), Adobe (Photoshop, Premiere Pro, Illustrator), Microsoft Office (Word, Excel, PowerPoint)

 CERTIFICATES

- Feb 2025 **AI Agents Fundamentals**
 Hugging Face. [Certificate](#).
- Jul 2023 **Generative AI with Large Language Models**
 Coursera. [Certificate](#).
- Ott 2020 **Natural Language Processing Specialization**
 Coursera. [Certificate](#).

 VOLUNTEERING

- 2019 – Today **AMAE Onlus – National Association for Esophageal Achalasia**
 I dedicate myself to merging my NLP and patient-centered experience to create tools in medical and biomedical domains to advance research. Member of the board of directors. Representative of the IT sector. Data scientist.
- Dec 2022 – Dec 2023 **Streamlit**
 I was selected as a member of the first Streamlit Student Ambassador cohort, Education Program (<50 students worldwide).
- Jun 2022 – Dec 2022 **HuggingFace**
 I was selected as a member of the first HuggingFace Student Ambassador program (<100 students worldwide, from all kinds of backgrounds).

Personal Data I authorize the processing of my personal data in accordance with Legislative Decree No. 196 of June 30, 2003, "Personal Data Protection Code."

DATE

June 23, 2025

SIGN

A handwritten signature in black ink, which appears to read "Giacomo Frisoni".