

Simone BALLOCCU



PROFILE

Computer scientist with 8+ years of experience in NLP & AI research, and author of 24 peer-reviewed NLP publications. I was involved in several EU-funded projects, including Horizon 2020, ERC and EU Erasmus Traineeship. I specialize in Expert-AI, including models and datasets for domains including behaviour change, counselling, and coding.

CONTACT DETAILS

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Hochschulstraße 10, 64289
Darmstadt (DE)

PERSONAL INFORMATION

Citizenship: **Italian**
Languages: **Italian** (Native),
English (IELTS-C1)

SKILLS

- Machine learning applied to NLP: training, analysis, bias, and fairness assessment.
- Extrinsic and Intrinsic NLP system evaluation, including Human-in-the-loop and Expert-in-the-loop.
- Dataset collection and annotation in NLP.

RESEARCH EXPERIENCE

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| JUNIOR LAB LEADER | 2024.10–present |
| 📍 <i>TU Darmstadt (DE)</i> | |
| > NLP for expert domains (ExpNLP) group | |
| ◊ Topics: Expert-AI dynamics | |
| POSTDOC | 2023.07–2024.09 |
| 📍 <i>Charles University (CZ)</i> | |
| > ERC-2021-STG, NG-NLG project | |
| ◊ Topics: Neuro-symbolic NLG; LLMs controllability. | |
| VISITING RESEARCHER | 2022.05–2022.10 |
| 📍 <i>Philips Research (NL)</i> | |
| > Horizon 2020, Philhumans project | |
| ◊ Topics: LLMs for counselling; AI-driven health activity tracking. | |
| VISITING RESEARCHER | 2020.07–2021.05 |
| 📍 <i>Philips Research (NL)</i> | |
| > Horizon 2020, Philhumans project | |
| ◊ Topics: LLMs for counselling. | |
| ASSISTANT RESEARCHER | 2018.12–2019.09 |
| 📍 <i>University of Cagliari (IT)</i> . | |
| > Sardegna Ricerche, DoUtDes project | |
| ◊ Topics: AI-driven marketing campaigns for companies | |
| ASSISTANT RESEARCHER | 2017.01–2019.09 |
| 📍 <i>University of Cagliari (IT)</i> . | |
| > Sardegna Ricerche, OKGraph project | |
| ◊ Topics: Unsupervised NLP algorithm for free-text knowledge extraction. | |

EDUCATION

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| PHD in Artificial Intelligence | 2019.10–2023.05 |
| 📍 <i>University of Aberdeen (UK)</i> . | |
| > Marie Skłodowska-Curie ESR - PHilhumans project (ESR-7) | |
| > Thesis title: <i>Emotion-aware and tailored diet coaching with Natural Language Generation.</i> | |

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|---|-----------------|
| M.Sc in Computer Science | 2017.10–2019.09 |
| 📍 <i>University of Cagliari (IT)</i> . | |
| > Thesis title: <i>Unsupervised Hypernym Discovery from plain text.</i> | |

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|---|-----------------|
| B.Sc in Computer Science | 2013.10–2017.09 |
| 📍 <i>University of Cagliari (IT)</i> . | |
| > Thesis title: <i>Unsupervised learning of IS-A relations from plain text.</i> | |

TEACHING

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| LECTURER | Spring 2025 – Summer 2025 |
| 📍 <i>TU Darmstadt (DE)</i> . | |
| > Deep Learning for Natural Language Processing | |
| ◊ Responsibilities: Lectures, course coordination. | |

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| TEACHING ASSISTANT | Winter 2023 – Spring 2024 |
| 📍 <i>Charles University (CZ)</i> . | |
| > NPFL099: Statistical Dialogue Systems | |
| ◊ Responsibilities: Marking and running lectures. | |

DEMONSTRATOR

Spring 2021 & Spring 2022

📍 University of Aberdeen (UK).

> **CS551H: Natural Language Generation**

> **Responsibilities:** Demonstrating and running lab practicals.

INVITED LECTURER

Spring 2020 & Spring 2021

📍 University of Cagliari (IT).

> **SC/o132/EN: Natural Language Processing**

> **Responsibilities:** Running invited lectures and related labs.

MENTORING

I have extensive mentoring experience at both B.Sc. and M.Sc. levels. Across my research career, I supervised and co-supervised more than 10 students at various institutions, including Charles University (CZ), University of Aberdeen (UK), and the University of Utrecht (NL). At TU Darmstadt (DE), I currently supervise, among several B.Sc. and M.Sc. theses, three PhD students within my lab.

ORGANISATIONAL EXPERIENCE

I served as reviewer for various top-tier conferences (including ACL, EMNLP, and ACL) and as Area Chair for at EMNLP Demo track; I served in the organizing committee for various workshops (including HUMEVAL, hostest at RANLP and LREC-COLING, Practical D2T at INLG) and conferences (including INLG and SIGDial).

RESEARCH AND PUBLICATIONS

Updated as per 04/12/2025. More information on [Google Scholar](#)

Peer-reviewed publications: 24

Google h-index: 10

Google i-10 index: 11

Citations: 559

- **"Leak, Cheat, Repeat: Data Contamination and Evaluation Malpractices in Closed-Source LLMs"**

Simone Balloccu, Patrícia Schmidtová, Mateusz Lango, Ondřej Dušek.

In Proceedings of the 18th Conference of the European Chapter of the Association for Computational Linguistics (Volume 1: Long Papers), Mar 2024

CORE Rank: A

🏆 **Best Non Publicized Paper Award**

- **"Automatic Metrics in Natural Language Generation: A survey of Current Evaluation Practices"**

Patricia Schmidtova, Saad Mahamood, **Simone Balloccu**, Ondrej Dusek, Albert Gatt, Dimitra Gkatzia, David M. Howcroft, Ondrej Platek, Adarsa Sivaprasad.

In Proceedings of the 17th International Natural Language Generation Conference, Sept 2024

CORE Rank: B

🏆 **Best Evaluation Paper Award**

› Selected peer-reviewed publications

- "Ask the experts: sourcing a high-quality nutrition counseling dataset through Human-AI collaboration"
Simone Balloccu, Ehud Reiter, Karen Jia-Hui Li, Rafael Sargsyan, Vivek Kumar, Diego Reforgiato, Daniele Riboni, Ondrej Dusek.
In Findings of the Association for Computational Linguistics: EMNLP 2024
- Are Experts Needed? On Human Evaluation of Counselling Reflection Generation.
Zixiu Wu, **Simone Balloccu**, Ehud Reiter, Rim Helaoui, Diego Reforgiato Recupero, Daniele Riboni.
In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), Jul 2023.
CORE Rank: A*
- Anno-MI: A Dataset of Expert-Annotated Counselling Dialogues.
Zixiu Wu, **Simone Balloccu**, Vivek Kumar, Rim Helaoui, Ehud Reiter, Diego Reforgiato Recupero, Daniele Riboni.
In ICASSP 2022 - 2022 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), May 2022.
CORE Rank: B