

# Simone BALLOCCU



## PROFILE

Computer scientist with 6+ years of experience in NLP & AI research, and author of 20 peer-reviewed NLP publications. I was involved in several EU-funded projects, including Horizon 2020, ERC and EU Erasmus Traineeship. I implemented and evaluated several AI resources for behaviour change, including conversational agents and datasets for nutrition counselling and motivational interviewing.

## CONTACT DETAILS

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Robert-Piloty-Building,  
Hochschulstraße 10, 64289  
Darmstadt (DE)

## PERSONAL INFORMATION

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

## SKILLS

- Python, Java, C, R, Scala, Javascript
- Machine learning model training, analysis, bias and fairness assessment.
- Implementation and evaluation of NLP systems in the context of behaviour change, counselling and mental health.

## RESEARCH EXPERIENCE

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

## EDUCATION

- PHD in Artificial Intelligence 2019.10–2023.05  
📍 University of Aberdeen (UK).  
➤ **Marie Skłodowska-Curie ESR - Philhumans project (ESR-7)**  
➤ Thesis title: *Emotion-aware and tailored diet coaching with Natural Language Generation.*
- M.Sc in Computer Science 2017.10–2019.09  
📍 University of Cagliari (IT).  
➤ Thesis title: *Unsupervised Hypernym Discovery from plain text.*
- B.Sc in Computer Science 2013.10–2017.09  
📍 University of Cagliari (IT).  
➤ Thesis title: *Unsupervised learning of IS-A relations from plain text.*

## TEACHING

- LECTURER Spring 2025 - Summer 2025  
📍 TU Darmstadt (DE).  
➤ **Deep Learning for Natural Language Processing**  
➤ **Responsibilities:** Lectures, course coordination.
- TEACHING ASSISTANT Winter 2023 - Spring 2024  
📍 Charles University (CZ).  
➤ **NPFL099: Statistical Dialogue Systems**  
➤ **Responsibilities:** Marking and running lectures.

- Extrinsic and Intrinsic NLP system evaluation;  
Human-in-the-loop and Expert-in-the-loop evaluation.
- LLMs prompt engineering including zero and few-shot prompting, prompt injection and red-teaming.

DEMONSTRATORSpring 2021 & Spring 2022

📍 University of Aberdeen (UK).

> **CS551H: Natural Language Generation**

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

INVITED LECTURERSpring 2020 & Spring 2021

📍 University of Cagliari (IT).

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

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

MENTORING

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📍 TU Darmstadt (DE)present

> 2 PhD students (in progress)

> 1 M.Sc. student (in progress)

📍 Charles University (CZ)2023-present

> 2 B.Sc. student (in progress)

> 1 M.Sc. student

📍 University of Aberdeen (UK)2023-2024

> 1 M.Sc. student

📍 University of Utrecht (NL)2021-2022

> 1 M.Sc. student

📍 University of Cagliari (IT)2020-2021

> 2 B.Sc. students

ORGANISATIONAL EXPERIENCE

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CO-CHAIR2024

- The 2nd Workshop on Practical LLM-assisted Data-to-Text Generation
- The 2nd Workshop on Practical LLM-assisted Data-to-Text Generation (Practical D2T 2024 @ INLG 2024)
- The International Workshop on Human-Centered Modeling and Adaptation for Digital Transformation (HUMAD 2024 @ ACM UMAP 2024)
- The 4rd Workshop on Human Evaluation of NLP Systems (HumEval 2024 @ LREC-COLING 2024)

ORGANIZING COMMITTEE MEMBER2023

- The 3rd Workshop on Human Evaluation of NLP Systems (HumEval 2023 @ RANLP 2023)

- **The 16th International Natural Language Generation Conference (INLG 2023)**
- **The 24th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDial 2023)**

## RESEARCH AND PUBLICATIONS

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Peer-reviewed publications: 20

Google h-index: 8

Google i-10 index: 6

Citations: 338

Metrics updated as per 08/04/2025. For more information, refer to [Google Scholar](#)

### > Selected peer-reviewed publications

- **"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**
- **"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