

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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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

- JUNIOR LAB LEADER** 2024.10–present
📍 *TU Darmstadt (DE)*
> **NLP for expert domains (ExpNLP) group**
◊ **Topics:** Expert-AI dynamics
- 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.

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. thesists, 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