

Beatrice Portelli

Currently: Research Fellow
University of Udine, Udine, Italy

Name	Beatrice
Surname	Portelli
Languages	Italian (native) English (C1) German (B1)

Education

11/2021 – 10/2024

PhD - Italian National PhD in Artificial Intelligence

University of Udine, Udine, Italy - Department of Mathematics, Computer Science and Physics
University of Naples Federico II, Naples, Italy - Department of Biology

Thesis: "From Machine Learning to Deep Learning: Expanding AI Applications in Environmental Sciences"

Supervisor: Serra Giuseppe, Baraldi Lorenzo

05/2021 – 10/2021

Research Fellowship

University of Udine, Udine, Italy - Department of Mathematics, Computer Science and Physics

Research Project: "Artificial Intelligence and Deep Learning for Digital Pharmacovigilance and Social Media"

Collaboration with: Bayer Pharmaceuticals

04/2020 – 04/2021

Research Fellowship

University of Udine, Udine, Italy - Department of Mathematics, Computer Science and Physics

Research Project: "Fighting Medical Fake News with Deep Learning techniques"

Collaboration with: Bayer Pharmaceuticals

2017 – 2020

MSc - Computer Science | 110/110 with honors

University of Udine, Udine, Italy - Department of Mathematics, Computer Science and Physics

Thesis: "Deep Learning for Fact Checking and Fake News Detection"

Supervisor: Serra Giuseppe, Collaboration with: MIT-CSAIL

2014 – 2017

BSc - Computer Science | 110/110 with honors

University of Udine, Udine, Italy - Department of Mathematics, Computer Science and Physics

Thesis: "Machine Learning Algorithms for Shoulder Injury Classification"

Supervisor: Serra Giuseppe, Collaboration with: NCS Lab Medical Devices Factory

Publications

Journal Papers

1. Fasihi, M., **Portelli, B.**, Cadez, L., Tomao, A., Falcon, A., Alberti, G., & Serra, G. (2024). Assessing ensemble models for carbon sequestration and storage estimation in forests using remote sensing data. *Ecological Informatics*. <https://doi.org/10.1016/j.ecoinf.2024.102828>
2. Mahmoud, S. S., **Portelli, B.**, D'Agostino, G., Pollastri, G., Serra, G., & Fogolari, F. (2023). A Comparison of Mutual Information, Linear Models and Deep Learning Networks for Protein Secondary Structure Prediction. *Current Bioinformatics*. <https://doi.org/10.2174/1574893618666230417103346>
3. Scaboro, S., **Portelli, B.**, Chersoni, E., Santus, E., & Serra, G. (2023). Extensive evaluation of transformer-based architectures for adverse drug events extraction. *Knowledge-Based Systems*. <https://doi.org/10.1016/j.knsys.2023.110675>
4. Roitero, K., **Portelli, B.**, Serra, G., Della Mea, V., Mizzaro, S., Cerro, G., ... & Molinara, M. (2023). Detection of Wastewater Pollution through Natural Language Generation with a Low-Cost Sensing Platform. *IEEE Access*. <https://doi.org/10.1109/ACCESS.2023.3277535>
5. Scaboro, S., **Portelli, B.**, Chersoni, E., Santus, E., & Serra, G. (2022). Increasing adverse drug events extraction robustness on social media: Case study on negation and speculation. *Experimental Biology and Medicine*. <https://doi.org/10.1177/15353702221128577>
6. **Portelli, B.**, Scaboro, S., Tonino, R., Chersoni, E., Santus, E., & Serra, G. (2022). Monitoring user opinions and side effects on COVID-19 vaccines in the Twittersphere: infodemiology study of tweets. *Journal of Medical Internet Research (JMIR)*. <https://doi.org/10.2196/35115>
7. Roitero, K., **Portelli, B.**, Popescu, M. H., & Della Mea, V. (2021). DiLBERT: Cheap embeddings for disease related medical NLP. *IEEE Access*. <https://doi.org/10.1109/ACCESS.2021.3131386>
8. Roitero, K., Soprano, M., **Portelli, B.**, De Luise, M., Spina, D., Mea, V. D., ... & Demartini, G. (2021). Can the crowd judge truthfulness? A longitudinal study on recent misinformation about COVID-19. *Personal and Ubiquitous Computing*. <https://doi.org/10.1007/s00779-021-01604-6>

Conference Papers

1. Zhai, Y., Bao, X., Chersoni, E., **Portelli, B.**, Lee, S. Y. M., Gu, J., & Huang, C. R. (2024, August). PolyCBS at SMM4H 2024: LLM-based Medical Disorder and Adverse Drug Event Detection with Low-rank Adaptation. In *Proceedings of the 9th Social Media Mining for Health Research and Applications Workshop and Shared Tasks (SMM4H 2024)*. <https://aclanthology.org/2024.smm4h-1.17>
2. Falcon, A., **Portelli, B.**, Abdari, A., & Serra, G. (2024). Paving the Way for Personalized Museums Tours in the Metaverse. In *Proceedings of the 20th Conference on Information and Research science Connecting to Digital and Library science (IRCDL 2024)*. <https://ceur-ws.org/Vol-3643/paper17.pdf>
3. **Portelli, B.**, Scaboro, S., & Serra, G. (2023, December). Improving Multi-lingual Medical Term Normalization to Address the Long-Tail Problem. In *Proceedings of the 37th Pacific Asia Conference on Language, Information and Computation (PACLIC 2023)*. <https://aclanthology.org/2023.paclic-1.81>
4. Remy, F., Scaboro, S., & **Portelli, B.** (2023, November). Boosting Adverse Drug Event Normalization on Social Media: General-Purpose Model Initialization and Biomedical Semantic Text Similarity Benefit Zero-Shot Linking in Informal Contexts. In *Proceedings of the 11th International Workshop on Natural Language Processing for Social Media (SocialNLP 2023@IJCNLP-AAACL 2023)*. <https://aclanthology.org/2023.socialnlp-1.6>
5. **Portelli, B.**, Tremamunno, A., Scaboro, S., Chersoni, E., & Serra, G. (2023). AILABUD at the NTCIR-17 MedNLP-SC Task: Monolingual vs Multilingual Fine-tuning for ADE Classification. In *Proceedings of the 17th Conference on Evaluation of Information Access Technologies*. <https://doi.org/10.20736/0002001313>

6. Locaputo, A., **Portelli, B.**, Colombi, E., & Serra, G. (2023). Filling the Lacunae in ancient Latin inscriptions. In *Proceedings of the 19th Conference on Information and Research science Connecting to Digital and Library science (IRCDL 2023)*. <https://ceur-ws.org/Vol-3365/short5.pdf>
7. **Portelli, B.**, Scaboro, S., Santus, E., Sedghamiz, H., Chersoni, E., & Serra, G. (2022, December). Generalizing over Long Tail Concepts for Medical Term Normalization. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022)* (pp. 8580-8591). <https://doi.org/10.18653/v1/2022.emnlp-main.588>
8. **Portelli, B.**, Scaboro, S., Chersoni, E., Santus, E., & Serra, G. (2022, October). AILAB-Udine@SMM4H'22: Limits of Transformers and BERT Ensembles. In *Proceedings of The Seventh Workshop on Social Media Mining for Health Applications, Workshop & Shared Task (SMM4H 2022)*. <https://aclanthology.org/2022.smm4h-1.36>
9. Scaboro, S., **Portelli, B.**, & Serra, G. (2022). Detection of Adverse Drug Events from Social Media Texts—Research Project Overview. In *Proceedings of the 1st AIXIA Workshop on Artificial Intelligence for Healthcare (HC@AIXIA 2022)*. <https://ceur-ws.org/Vol-3307/paper8.pdf>
10. Scaboro, S., **Portelli, B.**, Chersoni, E., Santus, E., & Serra, G. (2022). Negation detection for robust Adverse Drug Event extraction from social media texts. In *Proceedings of the 18th Italian Research Conference on Digital Libraries (IRCDL 2022)*. <https://ceur-ws.org/Vol-3160/short5.pdf>
11. **Portelli, B.**, Passabì, D., Lenzi, E., Serra, G., Santus, E., & Chersoni, E. (2021, February). Improving adverse drug event extraction with SpanBERT on different text typologies. In *International Workshop on Health Intelligence (W3PHIAI 2021)*. https://doi.org/10.1007/978-3-030-93080-6_8 **[Best Short Paper]**
12. Scaboro, S., **Portelli, B.**, Chersoni, E., Santus, E., & Serra, G. (2021, November). NADE: A Benchmark for Robust Adverse Drug Events Extraction in Face of Negations. In *Proceedings of the Seventh Workshop on Noisy User-generated Text (W-NUT 2021)*. <https://doi.org/10.18653/v1/2021.wnut-1.26>
13. **Portelli, B.**, Lenzi, E., Chersoni, E., Serra, G., & Santus, E. (2021, April). BERT prescriptions to avoid unwanted headaches: a comparison of transformer architectures for adverse drug event detection. In *Proceedings of the 16th conference of the European chapter of the Association for Computational Linguistics: main volume*. <https://doi.org/10.18653/v1/2021.eacl-main.149>
14. Lancioni, G., Mahmoud, S. S., **Portelli, B.**, Serra, G., & Tasso, C. (2021). Efficient Keyphrase Generation with GANs. In *Proceedings of the 17th Italian Research Conference on Digital Libraries (IRCDL 2021)*. <https://ceur-ws.org/Vol-2816/paper1.pdf>
15. Roitero, K., Soprano, M., **Portelli, B.**, Spina, D., Della Mea, V., Serra, G., ... & Demartini, G. (2020, October). The covid-19 infodemic: Can the crowd judge recent misinformation objectively?. In *Proceedings of the 29th ACM International Conference on Information & Knowledge Management*. <https://doi.org/10.1145/3340531.3412048>
16. **Portelli, B.**, Zhao, J., Schuster, T., Serra, G., & Santus, E. (2020). Distilling the Evidence to Augment Fact Verification Models. *ACL 2020*, 47. <https://doi.org/10.18653/v1/2020.fever-1.7>
17. Lancioni, G., Mahmoud, S. S., **Portelli, B.**, Serra, G., & Tasso, C. (2020). Keyphrase generation with GANs in low-resources scenarios. In *Proceedings of SustainNLP: Workshop on Simple and Efficient Natural Language Processing*. <https://doi.org/10.18653/v1/2020.sustainlp-1.12>

Other

1. Serra, G., **Portelli, B.**, Scaboro, S., & Chersoni, E. (2024). A perspective on Artificial Intelligence for digital pharmacovigilance in pandemics. In *Innovating Health Against Future Pandemics* (pp. 59-68). Academic Press. <https://doi.org/10.1016/B978-0-443-13681-8.00003-5>
2. Locaputo, A., **Portelli, B.**, Magnani, S., Colombi, E., & Serra, G. (2024). AI for the Restoration of Ancient Inscriptions: A Computational Linguistics Perspective, *Decoding Cultural Heritage: a critical dissection and taxonomy of human creativity through digital tools*. https://doi.org/10.1007/978-3-031-57675-1_7
3. Di Nunzio, G. M., **Portelli, B.**, Redavid, D., & Silvello, G. (2022). 18th Italian Research Conference on Digital Libraries: Information and Research Science connecting to Digital and Library Science. https://ceur-ws.org/Vol-3160/ircdl2022_preface.pdf

Teaching Experience / Invited Talks

	2023, 2022, 2020
Teaching Assistant – “Deep Learning” MSc in Computer Science, University of Udine	
	2023
Invited Talk – “Artificial intelligence: the decision maker of Tomorrow?” Talk organized by “Club Alpbach Senza Confini” and “Confindustria Udine” ↗	
	2023
Invited Talk – “Artificial Intelligence” event “Passione Meccatronica: dal progetto al lavoro” organized by “ITS Academy Meccatronico Veneto” ↗	
	2023
Invited Talk – “NERD? Non E' Roba per Donne?” promoted by the Department of Mathematics, Computer Science and Physics of the University of Udine. The project’s aim is to encourage female highschool students to pursue a career in IT and STEM.	
	2023
Lecture – “Exploring the Capabilities of Language Models” ↗ International Summer School on Artificial Intelligence AI-DLDA 2023, Udine, Italy	
	2021, 2020
Lecture – “Machine and Deep Learning for Natural Language Processing” ↗ ↗ International Summer School on Artificial Intelligence AI-DLDA 2020, Udine, Italy	

Services and Reviewing

	2025
Conference – Publicity Chair ↗ IRCDL 2025 – 21st Conference on Information and Research Science Connecting to Digital and Library Science	
	2024, 2023, 2022
Summer School – Organizer, Local Committee ↗ EQAI – European Summer School on Quantum AI	
	2023
Conference – Publicity/Social Chair ↗ ICIAP 2023 – 22nd International Conference on Image Analysis and Processing	
	2022
Conference – Program Chair ↗ IRCDL 2022 – 18th Italian Research Conference on Digital Libraries	
	2022
Conference – Local Arrangement Committee ↗ AIXIA 2022 – 21st International Conference of the Italian Association for Artificial Intelligence	

Conference Reviewer

AAAI Conference on Artificial Intelligence (**AAAI**). Neural Information Processing Systems (**NeurIPS**). IEEE International Conference on Tools with Artificial Intelligence (**ICTAI**). IAPR International Conference on Pattern Recognition (**ICPR**). Annual Meeting of the Association for Computational Linguistics (**ACL** 2023, 2024). ACM Multimedia (**ACM MM** 2023). Conference on Empirical Methods in Natural Language Processing (**EMNLP** 2023). Information and Research science Connecting to Digital and Library science (**IRCDL** 2023, 2024). Pacific Asia Conference on Language, Information and Computation (**PACLIC** 2023). Special Interest Group on Information Retrieval (**SIGIR** 2023). Social Media Mining for Health Research and Applications (**SMM4H** 2024). Italian Information Retrieval Workshop (**IIR** 2024). International Conference on Computational Linguistics (**COLING** 2025).

Journal Reviewer

Artificial Intelligence In Medicine (**AIIM** 2023). Database: The Journal of Biological Databases and Curation (**DATABASE** 2023). iForest - Biogeosciences and Forestry (**iForest** 2023). Journal of Computational Social Science (**JCSS** 2023). Mathematical Biosciences and Engineering (**MBE** 2024). Patterns (**PATTERNS** 2023). Social Network Analysis and Mining (**SNAM** 2023). Information processing and management (**IP&M** 2024).

I hereby authorize the processing of the personal data contained in this CV in compliance with the European Regulation (UE) 2016/679.

Udine (UD) – Italy, Oct 8, 2024 .

Beatrice Portelli