Human-Centred Natural Language Processing

Teacher
Dr. Marco Polignano (*https://marcopoli.github.io/*)
https://scholar.google.it/citations?user=sjQSYGQAAAAJ&hl=it&oi=ao
https://www.scopus.com/authid/detail.uri?authorId=56458088400

Course Website
https://t1p.de/l3nvp

Course description (min 150, max 300 words)

*The **Human-Centered Natural Language course** offers students a comprehensive overview of the latest advancements in **Deep Learning for NLP** for those seeking to understand the interplay between Artificial Intelligence and the Nuances of Human Language through **Generative AI**. It is designed for students with a foundational understanding of Machine Learning and Python Programming.*
The course goes beyond dry theory, offering a dynamic exploration of cutting-edge deep learning methodologies within NLP applications. The course begins with a solid foundation in the core principles of NLP. You'll delve into the art of representing words and sentences in a way that computers can understand, exploring tokenization techniques and the fascinating world of language modeling. Then, we will continue exploring the new approaches of Generative AI for NLP tasks, Large Language Models (LLMs) Training and Prompting.

Course period
Jan-Mar 2025

SSD
INF/01

Course References (optional)
- Speech and Language Processing. Dan Jurafsky and James H. Martin. Stanford University, 2024. https://t.ly/HZfJO
- LLMs in Production: From language models to successful products. Christopher Brousseau and Matthew Sharp Manning, 2024. https://t.ly/_NXmn
- Natural Language Processing with PyTorch. Delip Rao and Brian McMahan. O'Reilly, 2019
- Natural Language Processing with Transformers. Lewis Tunstall, Leandro von Werra, and Thomas Wolf. O'Reilly,2022
- Natural Language Processing with Deep Learning. Chris Manning.Stanford University, 2024. https://web.stanford.edu/class/archive/cs/cs224n/cs224n.1234/

Credits and Hours
2 credits, one of lectures (8 hours) and one of practice (15 hour), for a total of 23 hours.

Exam Modality

Two alternatives are available to the student to pass this exam:

1) Project. Students implement and experimentally validate an algorithm or its variation from a paper suggested by the teacher. Projects can be done in groups of 1-3 students, depending on the algorithm.
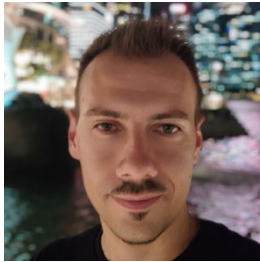
Teacher(s) CV

Attach or link a max 3 pages CV for each teacher proposing the course.

Teacher(s) Main Publications

1. Marco Polignano, Pasquale Lops, Marco de Gemmis, Giovanni Semeraro: HELENA: An intelligent digital assistant based on a Lifelong Health User Model. Inf. Process. Manag. 60(1): 103124 (2023)
2. Pasquale Lops, Marco Polignano, Cataldo Musto, Antonio Silletti, Giovanni Semeraro: ClayRS: An end-to-end framework for reproducible knowledge-aware recommender systems. Inf. Syst. 119: 102273 (2023)
3. Pasquale Lops, Elio Musacchio, Cataldo Musto, Marco Polignano, Antonio Silletti, Giovanni Semeraro: Reproducibility Analysis of Recommender Systems relying on Visual Features: traps, pitfalls, and countermeasures. RecSys 2023: 554-564
4. Giuseppe Spillo, Cataldo Musto, Marco Polignano, Pasquale Lops, Marco de Gemmis, Giovanni Semeraro: Combining Graph Neural Networks and Sentence Encoders for Knowledge-aware Recommendations. UMAP 2023: 1-12
5. Pierpaolo Basile, Elio Musacchio, Marco Polignano, Lucia Siciliani, Giuseppe Fiameni, Giovanni Semeraro: LLaMAntino: LLaMA 2 Models for Effective Text Generation in Italian Language. CoRR abs/2312.09993 (2023)
6. Marco Polignano, Valerio Basile, Pierpaolo Basile, Giuliano Gabrieli, Marco Vassallo, Cristina Bosco: A hybrid lexicon-based and neural approach for explainable polarity detection. Inf. Process. Manag. 59(5): 103058 (2022)
7. Marco Polignano, Fedelucio Narducci, Marco de Gemmis, Giovanni Semeraro: Towards Emotion-aware Recommender Systems: an Affective Coherence Model based on Emotion-driven Behaviors. Expert Syst. Appl. 170: 114382 (2021)
8. Cataldo Musto, Fedelucio Narducci, Marco Polignano, Marco de Gemmis, Pasquale Lops, Giovanni Semeraro: MyrrorBot: A Digital Assistant Based on Holistic User Models for Personalized Access to Online Services. ACM Trans. Inf. Syst. 39(4): 46:1-46:34 (2021)
9. Marco Polignano, Cataldo Musto, Marco de Gemmis, Pasquale Lops, Giovanni Semeraro: Together is Better: Hybrid Recommendations Combining Graph Embeddings and Contextualized Word Representations. RecSys 2021: 187-198
10. Marco Polignano, Pierpaolo Basile, Marco de Gemmis, Giovanni Semeraro, Valerio Basile: AlBERTo: Italian BERT Language Understanding Model for NLP Challenging Tasks Based on Tweets. CLiC-it 2019

PERSONAL INFORMATION

Marco Polignano

📍 Università degli Studi di Bari Aldo Moro (University of Bari "Aldo Moro")
  Dipartimento di Informatica (Department of Computer Science)
  Via Orabona 4
  70125 Bari (Italy)

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🌐 https://scholar.google.it/citations?user=sjQSYGQAAAAJ&hl=it&oi=ao
🌐 https://www.scopus.com/authid/detail.uri?authorId=56458088400

Sex M | *Date of birth* 24/05/1989 | *Nationality* Italian

h-index: 17 total, citations: 1324 (source: Google Scholar)

14 total, citations: 669 (source: Scopus)

Enterprise	University	EPR
☐ Management Level	☐ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☐ Associate Professor	☐ Level III Researcher and Technologist
☐ Employee / worker level	☒ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

December 2020 - present

Assistant Professor- RTD-A (SSD INF/01 - Computer Science)

Università degli Studi di Bari Aldo Moro, Dipartimento di Informatica

- Research topics: Machine Learning, Natural Language Processing, Recommender Systems, Data Mining, Data Science

Jan 2018 - Dec 2020

Post-doctoral Research Fellow (SSD INF/01 - Computer Science)

Università degli Studi di Bari Aldo Moro, Dipartimento di Informatica

- Research topics: Machine Learning, Natural Language Processing, Recommender Systems, Data Mining, Data Science

Mar 2016 - Jul 2016
Oct 2018 - Nov 2018
Apr 2019

Research Fellow (Marie Skłodowska-Curie actions)

Planetek Hellas, Marousi, Athens, Greece

- Research topics: Machine Learning, Natural Language Processing, Knowledge Representation

EDUCATION AND TRAINING

Sep 2008 - Dec 2013

Laurea Degree in Computer Science (summa cum Laude)

University of Bari, Italy

Nov 2014 – Nov 2017
Ph.D. Defence April 2018

Ph.D. in Computer Science and Mathematics

University of Bari, Italy

PROJECTS
Participation in research activities

Jan 2013 – Dec 2013
- HealthNet: Recommender system and backoffice for HealthNet (The Health Social network), "Apulian ICT Living Labs" P.O. FESR PUGLIA 2007-2013 - Asse I - Linea di Intervento 1.4 - Azione 1.4.2. - A.D. n. 307 del 31.07.2012.

Jan 2014 – Dec 2014
- ParsEco: Recommender systems and backoffice for Web Portal realized to increase the recycle of used domestic oils, "Apulian ICT Living Labs" P.O. FESR PUGLIA 2007-2013 - Asse I - Linea di Intervento 1.4 - Azione 1.4.2. - A.D. n. 307 del 31.07.2012

Jan 2014 - Dec 2014
- MAIVISTO Massive Adaptive Internet VIdeo STreaming using the clOud - Bando Startup MIUR 2014/2015 (D.D 436 del 13 Marzo 2013)

Jan 2015 - Dec 2016
- Digital Services Ecosystem DSE: PON03PE_00136_1, ICT/Tecnologie per Smart Communities

Jan 2016 - Dec 2018
- SEO-DWARF (Semantic EO Data Web Alert and Retrieval Framework) project n° 691071 European Horizon 2020, Marie Skłodowska-Curie actions - Research Fellowship programme, project SEO-DWARF (Semantic EO Data Web Alert and Retrieval Framework).

Jan 2018 - Dec 2018	- DECiSION: data-driven customer service innovation. INNONETWORK – Aiuti a sostegno alle Attività di R&S BQS5153 – DECISION - DATA-DRIVEN CUSTOMER SERVICE INNOVATION.
Jan 2020 - Apr 2020	- E-SHELF: electronic shopping & home delivery of edible goods with low environmental footprint. POR Puglia FESR 2014-2020 – Azione 1.6 bando INNONETWORK "sostegno alle attività di R&S per lo sviluppo di nuove tecnologie sostenibili, di nuovi prodotti e servizi"

Project reviewer	Expert evaluator for: - Austrian Science Fund (FWF) - Israel Science Foundation (ISF)

COMMUNITY SERVICE

Co-chair	- ACL 2022: 60th Annual Meeting of the Association for Computational Linguistics - EVALITA 2023: Evaluation of NLP and Speech Tools for Italian - EACL 2024: The 18th Conference of the European Chapter of the Association for Computational Linguistics
Workshop Co-Chair	- ATE_ABSITA 2020: Aspect Term Extraction and Aspect-based Sentiment Analysis Task co-located event of the 7th Italian Conference on Computational Linguistics - CLiC-it 2020 - ExUm: International Workshop on Transparent Personalization Methods based on Heterogeneous Personal Data at the ACM International Conference On User Modelling, Adaptation And Personalization: '19-'20-'21-'22-'23 - IntRS: Workshop on Interfaces and Human Decision Making for Recommender Systems at the ACM International Conference on Recommender Systems: 2022-2023 - NL4AI: Workshop on Natural Language for Artificial Intelligence (NL4AI, 6th edition) Co-located at the International Conference of the Italian Association for Artificial intelligence: 2022-2023
TPC member of some of the most relevant scientific conferences	- IUI 2017-2018-2024, International Intelligent User Interface conference - GRIN-GII A - UMAP 2018/2022/2023, User Modeling, Adaptation and Personalization conference - GRIN-GII B - IJCAI 2020, International Joint Conference on Artificial Intelligence - GRIN-GII A++ - ECAI 2020, European Conference on Artificial Intelligence - GRIN-GII A- - RecSys 2020-2022-2023, Conference on Recommender Systems - GRIN-GII A - TheWebConf 2022/2023 (WWW), International World Wide Web Conference - GRIN-GII A++ - The International Conference on Web Engineering (ICWE 2022) - Rating GRIN-GII B- - The International WSDM Conference 2023 - Rating GRIN-GII A+ - Conference on Artificial Intelligence AAAI 2023, GRIN-GII A++ - ACL 2023, Annual Meeting of the Association for Computational Linguistics - GRIN-GII A ++ - SIGIR 2023, Annual Conference of the Association for Computing Machinery Special Interest Group in Information Retrieval, - GRIN-GII A ++ - EACL 2024, The 18th Conference of the European Chapter of the Association for Computational Linguistics, - GRIN-GII A +

EDITORIAL ACTIVITY

Guest Editor	- Information Retrieval, Recommender Systems and Adaptive Systems", Information, EISSN 2078-2489, Published by MDP - Advances in Recommender Systems, Information Retrieval and Adaptive Systems", Information, EISSN 2078-2489, Published by MDPI
Editorial Board	- PLOS ONE - A peer-reviewed open-access scientific journal published by the Public Library of Science since 2006. Impact Factor: 3.752 (2021) - Frontiers in Natural Language Processing - Open access publisher of peer-reviewed scientific articles across the entire spectrum of academia, including computer science and machine learning. ISSN: 2624-8212 - IJCOL - It is the half-yearly journal founded by the Italian Association of Computational Linguistics. ISSN: 2499-4553 - Modern Intelligent Times. Open access. ISSN: 2957-7942
Reviewer Board	***More than 35 reviews for volumes and international high-quality journals including*** *Elsevier, Springer, IEEE* - Encyclopedia of Social Network Analysis and Mining (Springer Science Books) - IEEE-Access (The Multidisciplinary Open Access Journal of IEEE)

- Behaviour & Information Technology (Taylor & Francis)
- Journal of Ambient Intelligence and Humanized Computing (JAIHC – Springer)
- Intelligenza Artificiale, The International Journal of the AixIA (IOS Press)
- IJCOL: Italian Journal of Computational Linguistics (aAccademia University Press)
- Computer Science Review Journal (ELSEVIER)
- Cognitive System Research Journal (ELSEVIER)
- Engineering Reports (Wiley Online Library)
- Multimedia Tools and Applications (MTAP - Springer)
- Applied Sciences (MDPI)
- Artificial Intelligence Review (Springer Journal)
- Engineering Reports (Wiley Online Library)
- IEEE Transactions on Knowledge and Data Engineering (IEEE Press)
- Journal of Ambient Intelligence and Humanized Computing (JAIHC - Springer)
- IEEE Transactions on Cognitive and Developmental Systems (TCDS - IEEE Press)
- International Journal of Data Science and Analytics (Springer)
- International Journal of Human-Computer Interaction (Taylor & Francis)
- Journal of Intelligent Information Systems (JIIS - Springer)
- Transactions on Services Computing (IEEE Press)
- Information Processing and Management (Elsevier)
- Expert Systems with Applications (Elsevier)

CONTRIBUTION TO EARLY CAREERS OF RESEARCHERS/STUDENTS

Research Fellow Supervision

- Supervisor for the research grant on the funds of the competitive call of the Apulia Region, RIPARTI - Artificial Intelligence for the study of human motion and posture in predictive and rehabilitative medicine (911efb7f) based at the Department of Informatics, University of Bari Aldo Moro. The RIPARTI - POC Puglia FESR - FSE 2014-2020 - Action 10.4 call for proposals resulted in a grant of € 35,836.70 to establish an 18-month Research Grant for a research fellow.

- Supervisory activities of undergraduate students. Marco Polignano has been supervisor of more than 35 dissertations of a mainly experimental nature mainly experimental character carried out in Machine Learning and Natural language Processing.

- Co-supervisory activities of Ph.D. student. Marco Polignano is co-supervisor of a Ph.D. Student that started his studies in September 2023, about Recommender Systems, Natural Language Processing and Computer Vision for a Multimodal Perspective in eHealth domain.

TEACHING

Doctorate program

- "Deep Learning for Natural Language Processing". 3 ECTS credits, doctorate in Computer Science and Mathematics, University of Bari, a.y. 2021/2022
- "Deep Learning for Content Representation in Recommender Systems". 3 ECTS credits, Doctorate in Computer Science and Mathematics, University of Bari, a.y. 2022/2023

Bachelor

- "Information Systems", 6 ECTS credits, degree in Computer Science and Digital Communications, University of Bari, a.y. 2020/2021 – 2021/2022 .
- "Computer Science", 6 ECTS credits, degree in Mathematics, University of Bari, a.y. 2021/2022 – 2022/2023 - 2023/2024.
- "Methods for Information Retrieval", 2 ECTS credits, degree in Computer Science, University of Bari, a.y. 2022/2023 – 2023/2024.
- "Programming Languages", 1 ECTS credits, degree in Computer Science, University of Bari, a.y. 2022/2023 – 2023/2024.

INVITED TALKS

- Invited Speaker at SCAI'21, SCAI: Search-Oriented Conversational AI workshop. Invited speaker to present the research work pursued in the area of conversational and recommender systems. "MyrrorBot: A Digital Assistant Based on Holistic User Models for Personalized Access to Online Services TOIS 21" https://scai.info/program/
- RecSys Summer School 2023, Supported by ACM RecSys, ACM Europe Council, DDSA, and SIGCHI, June 12-16, 2023, Copenhagen, DK. TITLE: "Knowledge-based recommendation thrugh ClayRS"
- UMAP 2022/2023, ACM Conference on User Modeling, Adaptation and Personalization. TITLE:

"Semantics-aware Content Representations for Reproducible Recommender Systems (SCoRe)"

- CREA - Council for Research in Agriculture and Agricultural Economics of the Ministry of the Italian Republic 20/10/2023. TITLE: "Sentiment Analysis with CREA: Deep learning for content analysis"
- Workshop in Quantitative Finance the 25th and 26th of May 2023. TITLE: "Information Extraction for Economics"

FELLOWSHIPS AND AWARDS

2016 - 2019

Marie Skłodowska-Curie RISE action Horizon 2020: SEO-DWARF (Semantic EO Data Web Alert and Retrieval Framework) project n° 691071. The research period at the foreign institution was held in Athens, Greece at the Planetek Hellas Research Center, Athens, Greece supervised by the coordinator of research activities Stelios Bollanos. The period was held from 01/03/2016 to 31/07/2016. A second secondment, in the same location, was held from 25/10/2018 to 09/11/2018 and from 02/04/2019 to 15/04/2019. For a total of 6 months of which 5 were continuous.

MEMBERSHIP OF SCIENTIFIC ASSOCIATIONS

2016

International Academy, Research, and Industry Association (IARIA)

2015

International Association of Interaction Design (IxDA)

2017 - Current

Member of the ACM

2014 - Current

Associazione Italiana per l'Intelligenza Artificiale (AI*IA)

2021 - Current

CITEL, centro interdipartimentale di ricerca in "Telemedicina"

2017 - Current

IEEE Advancing Technologies for Humanity

2015 - Current

National Consortium for University and IT - "Artificial Intelligence and Intelligent Systems." (CINI)

ADDITIONAL INFORMATION

Research interests

- Main research activities are in Artificial Intelligence and more specifically, in machine learning, data mining and big data analytics. Main applications are in natural language processing, information filtering and recommender systems, knowledge representation, user modeling, sentiment analysis, and eHealth.

Technological transfer

- Marco Polignano is a Founding Partner of Asteria S.r.l. The company launched in 2020 through the regional public funding Pugliesi Innovativi (PIN - Initiative financed with resources from the Fund for Development and Cohesion and the 2014/2020 Puglia OP) is concerned with establishing strong collaborations with regional and national industry areas in order to transfer university KNOW-HOW into the industrial world. The topics covered by the company cover those high-tech solutions based on Artificial Intelligence applied to Conversational Agents, Recommender Systems, and Natural Language Processing.

Additional Activities

- Tutor of students of the 2nd level Master's degree in "DATA SCIENCE: Methodologies, analysis, design, solutions" Politecnico di Bari, University of Bari ALDO MORO and Spegea - Business School. http://www.poliba.it/it/didattica/master - http://datascience.di.uniba.it/ Editions: 2018, 2019, 2021.

- Member of the CINI COVID-19 Task Force for the census of technology activities in COVID-19 suit on Italian territory by CINI. 2019-2022.

PUBLICATIONS

Publications
in the last 10 years

- Lops, P., Polignano, M., Musto, C., Silletti, A., & Semeraro, G. (2023). ClayRS: An end-to-end framework for reproducible knowledge-aware recommender systems. Information Systems, 119,

102273.

- Lops, P., Musacchio, E., Musto, C., Polignano, M., Silletti, A., & Semeraro, G. (2023, September). Reproducibility Analysis of Recommender Systems relying on Visual Features: traps, pitfalls, and countermeasures. In Proceedings of the 17th ACM Conference on Recommender Systems (pp. 554-564).
- Brusilovsky, P., De Gemmis, M., Felfernig, A., Lops, P., Polignano, M., Semeraro, G., & Willemsen, M. C. (2023, September). 10th Joint Workshop on Interfaces and Human Decision Making for Recommender Systems (IntRS'23). In Proceedings of the 17th ACM Conference on Recommender Systems (pp. 1255-1258).
- Lops, P., Musto, C., & Polignano, M. (2023, June). Accountable Knowledge-aware Recommender Systems. In Proceedings of the 31st ACM Conference on User Modeling, Adaptation and Personalization (pp. 306-308).
- Spillo, G., Musto, C., Polignano, M., Lops, P., de Gemmis, M., & Semeraro, G. (2023, June). Combining Graph Neural Networks and Sentence Encoders for Knowledge-aware Recommendations. In Proceedings of the 31st ACM Conference on User Modeling, Adaptation and Personalization (pp. 1-12).
- Musto, C., Delic, A., Inel, O., Polignano, M., Rapp, A., Semeraro, G., & Ziegler, J. (2023, June). 5th Workshop on Explainable User Models and Personalised Systems (ExUM). In Adjunct Proceedings of the 31st ACM Conference on User Modeling, Adaptation and Personalization (pp. 196-198).
- Lai, M., Menini, S., Polignano, M., Russo, V., Sprugnoli, R., & Venturi, G. (2023). Evalita 2023: Overview of the 8th evaluation campaign of natural language processing and speech tools for italian. In Proceedings of the Eighth Evaluation Campaign of Natural Language Processing and Speech Tools for Italian. Final Workshop (EVALITA 2023), CEUR. org, Parma, Italy.
- Polignano, M., Lops, P., de Gemmis, M., & Semeraro, G. (2023). HELENA: An intelligent digital assistant based on a Lifelong Health User Model. Inf. Process. Manag., 60(1), 103124. doi:10.1016/j.ipm.2022.103124
- Polignano, M., Basile, V., Basile, P., Gabrieli, G., Vassallo, M., & Bosco, C. (2022). A hybrid lexicon-based and neural approach for explainable polarity detection. Inf. Process. Manag., 59(5), 103058. doi:10.1016/j.ipm.2022.103058
- Polignano, M., Colavito, G., Musto, C., de Gemmis, M., & Semeraro, G. (2022). Lexicon Enriched Hybrid Hate Speech Detection with Human-Centered Explanations. UMAP '22: 30th ACM Conference on User Modeling, Adaptation and Personalization, Barcelona, Spain, July 4 - 7, 2022, Adjunct Proceedings, 184–191. doi:10.1145/3511047.3537688
- Polignano, M., Narducci, F., de Gemmis, M., & Semeraro, G. (2021). Towards Emotion-aware Recommender Systems: an Affective Coherence Model based on Emotion-driven Behaviors. Expert Syst. Appl., 170, 114382. doi:10.1016/j.eswa.2020.114382
- Kopsachilis, V., Siciliani, L., Polignano, M., Kolokoussis, P., Vaitis, M., de Gemmis, M., & Topouzelis, K. N. (2021). Semantically-Aware Retrieval of Oceanographic Phenomena Annotated on Satellite Images. Inf., 12(8), 321. doi:10.3390/info12080321
- Musto, C., Narducci, F., Polignano, M., de Gemmis, M., Lops, P., & Semeraro, G. (2021). MyrrorBot: A Digital Assistant Based on Holistic User Models for Personalized Access to Online Services. ACM Trans. Inf. Syst., 39(4), 46:1-46:34. doi:10.1145/3447679
- Polignano, M., de Gemmis, M., & Semeraro, G. (2021). Comparing Transformer-based NER approaches for analysing textual medical diagnoses. In G. Faggioli, N. Ferro, A. Joly, M. Maistro, & F. Piroi (Eds.), Proceedings of the Working Notes of CLEF 2021 - Conference and Labs of the Evaluation Forum, Bucharest, Romania, September 21st - to - 24th, 2021 (pp. 818–833).
- Polignano, M., Musto, C., de Gemmis, M., Lops, P., & Semeraro, G. (2021). Together is Better: Hybrid Recommendations Combining Graph Embeddings and Contextualized Word Representations. In H. J. C. Pampín, M. A. Larson, M. C. Willemsen, J. A. Konstan, J. J. McAuley, J. Garcia-Gathright, … E. Oldridge (Eds.), RecSys '21: Fifteenth ACM Conference on Recommender Systems, Amsterdam, The Netherlands, 27 September 2021 - 1 October 2021 (pp. 187–198). doi:10.1145/3460231.3474272
- Polignano, M., Narducci, F., Iovine, A., Musto, C., de Gemmis, M., & Semeraro, G. (2020). HealthAssistantBot: A Personal Health Assistant for the Italian Language. IEEE Access, 8, 107479–107497. doi:10.1109/ACCESS.2020.3000815
- Musto, C., Polignano, M., Semeraro, G., de Gemmis, M., & Lops, P. (2020). Myrror: a platform for holistic user modeling. User Model. User Adapt. Interact., 30(3), 477–511. doi:10.1007/s11257-020-09272-6
- Polignano, M., Suriano, V., Lops, P., de Gemmis, M., & Semeraro, G. (2020). A study of Machine Learning models for Clinical Coding of Medical Reports at CodiEsp 2020. In L. Cappellato, C. Eickhoff, N. Ferro, & A. Névéol (Eds.), Working Notes of CLEF 2020 - Conference and Labs of the Evaluation Forum, Thessaloniki, Greece, September 22-25, 2020. Retrieved from http://ceur-ws.org/Vol-2696/paper_112.pdf
- Polignano, M., Basile, P., de Gemmis, M., Lops, P., & Semeraro, G. (2020). A Deep Learning Model for the Analysis of Medical Reports in ICD-10 Clinical Coding Task. In J. Monti, F. Dell'Orletta, & F. Tamburini (Eds.), Proceedings of the Seventh Italian Conference on Computational Linguistics, CLiC-it 2020, Bologna, Italy, March 1-3, 2021. Retrieved from http://ceur-ws.org/Vol-2769/paper_43.pdf
- de Pinto, M. G., Polignano, M., Lops, P., & Semeraro, G. (2020). Emotions Understanding Model from Spoken Language using Deep Neural Networks and Mel-Frequency Cepstral Coefficients. 2020 IEEE Conference on Evolving and Adaptive Intelligent Systems, EAIS 2020, Bari, Italy, May 27-29, 2020, 1–5. doi:10.1109/EAIS48028.2020.9122698
- Esposito, D., Polignano, M., Basile, P., de Gemmis, M., Primiceri, D., Lisi, S., … Manzari, V. (2020). DECiSION: Data-drivEn Customer Service InnovatiON. In O. Gervasi, B. Murgante, S. Misra, C. Garau, I. Blecic, D. Taniar, Y. Karaca (Eds.), Computational Science and Its Applications - ICCSA 2020 - 20th

International Conference, Cagliari, Italy, July 1-4, 2020, Proceedings, Part IV (pp. 94–103). doi:10.1007/978-3-030-58811-3_7

- Polignano, M., de Gemmis, M., & Semeraro, G. (2020). Contextualized BERT Sentence Embeddings for Author Profiling: The Cost of Performances. In O. Gervasi, B. Murgante, S. Misra, C. Garau, I. Blecic, D. Taniar, Y. Karaca (Eds.), Computational Science and Its Applications - ICCSA 2020 - 20th International Conference, Cagliari, Italy, July 1-4, 2020, Proceedings, Part IV (pp. 135–149). doi:10.1007/978-3-030-58811-3_10

- Iovine, A., Narducci, F., de Gemmis, M., Polignano, M., Basile, P., & Semeraro, G. (2020). A Comparison of Services for Intent and Entity Recognition for Conversational Recommender Systems. In P. Brusilovsky, M. de Gemmis, A. Felfernig, P. Lops, J. O'Donovan, G. Semeraro, & M. C. Willemsen (Eds.), Proceedings of the 7th Joint Workshop on Interfaces and Human Decision Making for Recommender Systems co-located with 14th ACM Conference on Recommender Systems (RecSys 2020), Online Event, September 26, 2020 (pp. 37–47). Retrieved from http://ceur-ws.org/Vol-2682/paper4.pdf

- Cassotti, P., Caputo, A., Polignano, M., & Basile, P. (2020a). GM-CTSC at SemEval-2020 Task 1: Gaussian Mixtures Cross Temporal Similarity Clustering. In A. Herbelot, X. Zhu, A. Palmer, N. Schneider, J. May, & E. Shutova (Eds.), Proceedings of the Fourteenth Workshop on Semantic Evaluation, SemEval@COLING 2020, Barcelona (online), December 12-13, 2020 (pp. 74–80). doi:10.18653/v1/2020.semeval-1.7

- Musto, C., Narducci, F., Polignano, M., de Gemmis, M., Lops, P., & Semeraro, G. (2020). Towards Queryable User Profiles: Introducing Conversational Agents in a Platform for Holistic User Modeling. In T. Kuflik, I. Torre, R. Burke, & C. Gena (Eds.), Adjunct Publication of the 28th ACM Conference on User Modeling, Adaptation and Personalization, UMAP 2020, Genoa, Italy, July 12-18, 2020 (pp. 213–218). doi:10.1145/3386392.3399298

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Bari, 23/05/2024

Marco Polignano

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