Daniele Malitesta

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🌐 https://danielemalitesta.github.io/

Employment History

Nov 2019 – Oct 2020　　🔖　**Research Assistant,** Polytechnic University of Bari (Bari, Italy).

May 2023 – July 2023　　🔖　**Researcher Intern,** The University of Edinburgh (Edinburgh, United Kingdom).

Education

2020 – 2023　　🔖　**Ph.D. in Computer Science Engineering**, Polytechnic University of Bari (Bari, Italy).
Thesis title: *Graph Neural Networks for Recommendation leveraging Multimodal Information.*

2017 – 2019　　🔖　**M.Sc. in Computer Science Engineering**, Polytechnic University of Bari (Bari, Italy).
Thesis title: *Novel Approaches to Image Compression via Deep Learning.*

2014 – 2017　　🔖　**B.Sc. in Computer Science and Automation Engineering**, Polytechnic University of Bari (Bari, Italy).
Thesis title: *Performance Evaluation of Data-Centric Networks based upon Semantic-Naming Algorithms.*

Research Publications

A selection of research publications since 2020. As the author lists may sometimes follow the alphabetical order, corresponding authors are explicitly reported in **boldface**.

Journal Articles

1. **Daniele Malitesta**, G. Cornacchia, C. Pomo, F. A. Merra, T. Di Noia, and E. Di Sciascio, "Formalizing multimedia recommendation through multimodal deep learning," *Under review in Transactions on Recommender Systems (TORS)*, 2023, accessible on arXiv: https://arxiv.org/abs/2309.05273.

Conference Proceedings

1. V. W. Anelli, Y. Deldjoo, T. Di Noia, **Daniele Malitesta**, V. Paparella, and **Claudio Pomo**, "Auditing consumer- and producer-fairness in graph collaborative filtering," in *ECIR (1)*, ser. Lecture Notes in Computer Science, vol. 13980, Springer, 2023, pp. 33–48.

2. **Daniele Malitesta**, **Claudio Pomo**, V. W. Anelli, T. Di Noia, and A. Ferrara, "An out-of-the-box application for reproducible graph collaborative filtering extending the elliot framework," in *UMAP (Adjunct Publication)*, ACM, 2023, pp. 12–15.

3. **Daniele Malitesta**, **Claudio Pomo**, V. W. Anelli, A. C. M. Mancino, E. Di Sciascio, and T. Di Noia, "A topology-aware analysis of graph collaborative filtering," vol. abs/2308.10778, 2023.

4. **Daniele Malitesta**, **Giandomenico Cornacchia**, C. Pomo, and T. Di Noia, "Disentangling the performance puzzle of multimodal-aware recommender systems," in *EvalRS@KDD*, ser. CEUR Workshop Proceedings, vol. 3450, CEUR-WS.org, 2023.

5   **Daniele Malitesta**, **Giandomenico Cornacchia**, C. Pomo, and T. Di Noia, "On popularity bias of multimodal-aware recommender systems: A modalities-driven analysis," in *MMIR@MM*, ACM, 2023.

6   **Daniele Malitesta**, **Giuseppe Gassi**, C. Pomo, and T. Di Noia, "Ducho: A unified framework for the extraction of multimodal features in recommendation," in *MM*, ACM, 2023.

7   **Vito Walter Anelli**, **Daniele Malitesta**, **Claudio Pomo**, A. Bellogín, E. Di Sciascio, and T. Di Noia, "Challenging the myth of graph collaborative filtering: A reasoned and reproducibility-driven analysis," in *RecSys*, ACM, 2023, pp. 350–361.

8   V. W. Anelli, Y. Deldjoo, T. Di Noia, E. Di Sciascio, A. Ferrara, **Daniele Malitesta**, and **Claudio Pomo**, "How neighborhood exploration influences novelty and diversity in graph collaborative filtering," in *MORS@RecSys*, ser. CEUR Workshop Proceedings, vol. 3268, CEUR-WS.org, 2022.

9   V. W. Anelli, Y. Deldjoo, T. Di Noia, E. Di Sciascio, A. Ferrara, **Daniele Malitesta**, and **Claudio Pomo**, "Reshaping graph recommendation with edge graph collaborative filtering and customer reviews," in *DL4SR@CIKM*, ser. CEUR Workshop Proceedings, vol. 3317, CEUR-WS.org, 2022.

10   Y. Deldjoo, T. Di Noia, **Daniele Malitesta**, and F. A. Merra, "Leveraging content-style item representation for visual recommendation," in *ECIR (2)*, ser. Lecture Notes in Computer Science, vol. 13186, Springer, 2022, pp. 84–92.

11   V. W. Anelli, Y. Deldjoo, T. Di Noia, **Daniele Malitesta**, and **Felice Antonio Merra**, "A study of defensive methods to protect visual recommendation against adversarial manipulation of images," in *SIGIR*, ACM, 2021, pp. 1094–1103.

12   Y. Deldjoo, T. Di Noia, **Daniele Malitesta**, and F. A. Merra, "A study on the relative importance of convolutional neural networks in visually-aware recommender systems," in *CVPR Workshops*, Computer Vision Foundation / IEEE, 2021, pp. 3961–3967.

13   **Vito Walter Anelli**, A. Bellogín, A. Ferrara, **Daniele Malitesta**, F. A. Merra, **Claudio Pomo**, F. M. Donini, and T. Di Noia, "V-elliot: Design, evaluate and tune visual recommender systems," in *RecSys*, ACM, 2021, pp. 768–771.

14   **Vito Walter Anelli**, A. Bellogín, A. Ferrara, D. Malitesta, F. A. Merra, **Claudio Pomo**, F. M. Donini, and T. Di Noia, "Elliot: A comprehensive and rigorous framework for reproducible recommender systems evaluation," in *SIGIR*, ACM, 2021, pp. 2405–2414.

15   V. W. Anelli, T. Di Noia, **Daniele Malitesta**, and **Felice Antonio Merra**, "Assessing perceptual and recommendation mutation of adversarially-poisoned visual recommenders (short paper)," in *DP@AI*IA*, ser. CEUR Workshop Proceedings, vol. 2776, CEUR-WS.org, 2020, pp. 49–56.

Skills

Languages	▌	Strong reading, writing and speaking competencies in English.
Coding	▌	Python, Java, C++, C.
ML frameworks	▌	TensorFlow, PyTorch, PyTorch Geometric.
Deployment	▌	Docker, Kubernetes.
HPC	▌	Slurm.
Misc.	▌	Academic research, teaching, presentations at international conferences, peer reviewing of scientific papers.

Miscellaneous Experience

Awards

Sept 2023   ▌ **Outstanding Reviewer**, the 17th ACM Conference on Recommender Systems (RecSys 2023).

Tutorials organization

Nov 2023   ▌ **Graph Neural Networks for Recommendation: Reproducibility, Graph Topology, and Node Representation**, the 2nd Learning on Graphs Conference (LoG 2023).

Workshops organization

Mar 2024   ▌ **First International Workshop on Graph-Based Approaches in Information Retrieval (IRonGraphs)**, co-located with the 46th European Conference on Information Retrieval (ECIR 2024).

Peer-reviewing

2024   ▌ ICLR, ECIR.

2023   ▌ NeurIPS, TGL@NeurIPS, LoG, RecSys, KaRS@RecSys, LERI@RecSys, EvalRS@KDD, SIGIR, ISIR-eComm@The Web Conf, TOIS.

2022   ▌ LoG, KaRS@RecSys.

2021   ▌ KaRS@RecSys.

References

Available upon request.