

ImFact: A Benchmark Dataset for Image Retrieval in Automated Fact-checking (Presentation Summary)

Rafael Martins Frade^{1,2,*}, Arkaitz Zubiaga³

¹*Newtral Media Audiovisual, Spain*

²*University of Santiago de Compostela, Spain*

³*Queen Mary University of London, United Kingdom*

Abstract

This document presents a summary of a presentation delivered at the ROMCIR workshop [1].

Keywords

Automated Fact-checking, Image Retrieval, Multimodal Fact-checking

In this presentation, we discuss a research paper introducing ImFact, a dataset and experimental framework for image retrieval in the context of automated fact-checking. We address the growing need for approaches that deal with modalities beyond text [2, 3] by focusing on image retrieval as a key component for verifying visual misinformation.

It is the first dataset focused on near-duplicate retrieval for disinformation detection. It consists of 2,473 images organized into 617 near-duplicate clusters. Each cluster includes the same image with different modifications, either fact-checked by different organizations or that circulated on different social media platforms. Every image is accompanied by a claim review written by a professional fact-checker.

The presentation also discusses the retrieval methods explored in the paper. We investigate a contrastive learning framework to fine-tune vision models for retrieving related images, simulating realistic modifications through extensive data augmentations. Results across convolutional and transformer-based architectures demonstrate consistent performance improvements after fine-tuning, including stronger cross-domain generalization and enhanced retrieval performance.

Overall, the results show that specialized training and benchmarking resources can significantly enhance image retrieval capabilities, strengthening automated fact-checking pipelines and improving the detection and verification of visual misinformation. The dataset will be made available to other researchers, enabling the benchmark and improvement of fact-checking systems and providing the opportunity to further explore retrieval methods, either by incorporating additional modalities or experimenting with alternative retrieval strategies.

Declaration on Generative AI

The authors used GPT-5.2 [4] for rephrasing, sentence polishing and latex formatting. All content has been reviewed and verified by the authors.

Acknowledgments

The authors thank the funding from the Horizon Europe research and innovation program under the Marie Skłodowska-Curie Grant Agreement No. 101073351. Views and opinions expressed are however

ROMCIR 2026: The 6th Workshop on Reducing Online Misinformation through Credible Information Retrieval (held as part of ECIR 2026: the 48th European Conference on Information Retrieval), March 2, 2026, Delft, The Netherlands.

*Corresponding author.

✉ mfrade.rafael@gmail.com (R. M. Frade); a.zubiaga@qmul.ac.uk (A. Zubiaga)

🌐 <https://www.zubiaga.org> (A. Zubiaga)

🆔 0000-0003-4583-3623 (A. Zubiaga)



© 2026 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them. We acknowledge Queen Mary's Apocrita HPC facility, supported by QMUL Research-IT, for enabling our experiments [5].

References

- [1] M. Fernández-Pichel, M. Petrocchi, K. Roitero, M. Viviani, ROMCIR 2026: Overview of the 6th workshop on reducing online misinformation through credible information retrieval, in: European Conference on Information Retrieval, Springer, 2026.
- [2] M. Akhtar, M. Schlichtkrull, Z. Guo, O. Cocarascu, E. Simperl, A. Vlachos, Multimodal automated fact-checking: A survey, in: Findings of the Association for Computational Linguistics: EMNLP 2023, 2023, pp. 5430–5448.
- [3] R. M. Frade, R. Panchendrarajan, A. Zubiaga, Multicaption: Detecting disinformation using multi-lingual visual claims, arXiv preprint arXiv:2601.11220 (2026).
- [4] OpenAI, Gpt-5.2, <https://openai.com>, 2025. Large language model.
- [5] T. King, S. Butcher, L. Zalewski, Apocrita - High Performance Computing Cluster for Queen Mary University of London, 2017. URL: <https://doi.org/10.5281/zenodo.438045>. doi:10.5281/zenodo.438045.