

DaQuaMRec

1st International Workshop on

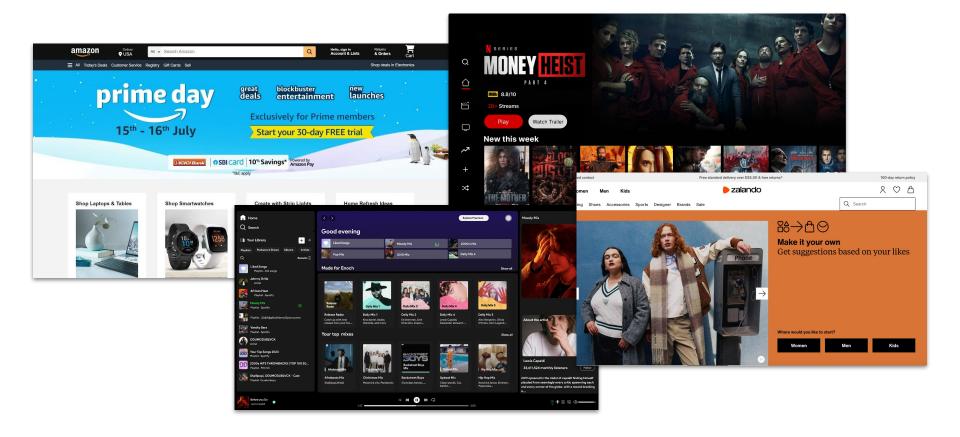
Data Quality-Aware Multimodal Recommendation

September 22, 2025

Multimodal recommendation is a trend topic

[-] Publicatio	n search results 👢	[-] Refine list	
found 419 ma	tches	100	
2026			
■ B & & &	Angelo Geninatti Cossatin ©, Noemi Mauro ©: Shrinking for success: Multimodal dimensionality reduction for sustainable recommender systems. Expert Syst. Appl. 296: 128929 (2026)	2001 2026 refine by author Tommaso Di Noia (15)	
	Ziyu Chen, Naijie Chai, Jianqiang Wang, Xiaokang Wang: Restaurant recommendations under multimodal online reviews: A novel method based on image captioning and text analysis with multi-criteria decision-making. Inf. Process. Manag. 63(1): 104308 (2026)	Daniele Malitesta (14) Claudio Pomo (14) Xin Zhou 1008 (14) Zheyu Chen 1003 (10) Jinfeng Xu 1003 (10)	
1025 ■ 🖥 基 약 숙	Khalil Bachiri ©, Ali Yahyaouy, Maria Malek, Nicoleta Rogovschi: Topological Data Analysis and Graph-Based Learning for Multimodal Recommendation. IEEE Access 13: 108934-108954 (2025)	Liqiang Nie (10) Yinwei Wei (9) Zhiqi Shen య (9) 1,341 more options	
■ 월 & ≪	Mario Casillo ©, Francesco Colace ©, Angelo Lorusso ©, Domenico Santaniello ©, Carmine Valentino ©: Integrating Physical and Virtual Experiences in Cultural Tourism: An Adaptive Multimodal Recommender System. IEEE Access 13: 28353-28368 (2025)	refine by venue Comput. Res. Repos. (138) MM (17) Lect. Notes Comput. Sci. (16)	
■ 월 잔 샹 ≪	J. Madhuri ©, Ramana Reddy B ©, Gauri Kalnoor ©, M. Indiramma ©, N. Nagarathna ©: Optimizing Crop Recommendations With Improved Deep Belief Networks: A Multimodal Approach. IEEE Access 13: 31762-31773 (2025)	IEEE Access (12) WWW (12) IEEE Trans. Multim. (10) AAAI (9)	
■ 월 쇼 ≪	Pei Tang, Shuo Zhu , Bilal Alatas :: Improving News Recommendation Accuracy Through Multimodal Variational Autoencoder and Adversarial Training. IEEE Access 13: 85269-85278 (2025)	SIGIR (8) CIKM (7) IEEE Trans. Comput. Soc. Syst. (7) 129 more options	
■ 월 कि ≪	Xiaopeng Wang, Xue Liang : HMSTNet: A Deep Learning Multimodal Approach for Personalized English Literature Recommendations. IEEE Access 13: 74980-74995 (2025)	refine by type Conference and Workshop Papers (160) Informal and Other Publications (137)	
■ 월 잔 샹 ≪	Peng Yi , Lu Chen , Zhaoxian Li , Cheng Yang : A Novel Hierarchical Multimodal Recommender With Enhanced Global Collaborative Signals. IEEE Access 13: 92102-92113 (2025)	Journal Articles (117) Books and Theses (2) Parts in Books or Collections (1) Editorship (1)	
■ □ □ ♥ ≪	Yanke Chen, Tianhao Sun, Yunhao Ma, Huhai Zou: Multifactorial modality fusion network for multimodal recommendation. Appl. Intell. 55(2): 139 (2025)	Withdrawn Items (1) refine by access	
	Ruidong Wang, Chao Li, Zhongying Zhao : Towards user-specific multimodal recommendation via cross-modal attention-enhanced graph convolution network. Appl. Intell. 55(1): 2 (2025)	closed (234) open (181) unavailable (3) withdrawn (1)	

Multimodality is pervasive in recommendation



Multimodal data can boost recommendation performance

Model	Precision	Kwai Recall	NDCG
VBPR	0.2673	0.3386	0.1988
ACF	0.2559	0.3248	0.1874
GraphSAGE	0.2718	0.3412	0.2013
NGCF	0.2789	0.3463	0.2058
MMGCN	0.3057*	0.3996*	0.2298*
%Improv.	9.61%	15.59%	11.66%

Model	Clothing						
Model	R@20	P@20	NDCG@20				
MF	0.0191	0.0010	0.0088				
NGCF	0.0387	0.0020	0.0168				
LightGCN	0.0470	0.0024	0.0215				
VBPR	0.0481	0.0024	0.0205				
MMGCN	0.0501	0.0024	0.0221				
GRCN	0.0631	0.0032	0.0276				
LATTICE	0.0710	0.0036	0.0316				
Improv.	12.5%	12.2%	14.6%				

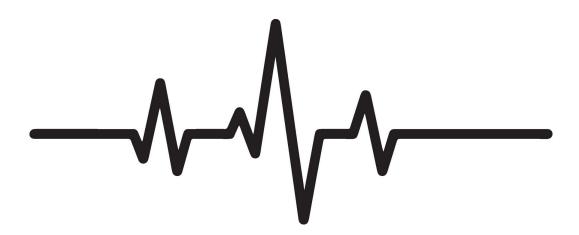
Dataset	Metric	General CF model		Multimodal model							
		BPR	LightGCN	VBPR	MMGCN	GRCN	DualGNN	SLMRec	LATTICE	FREEDOM	improv.
Baby	R@10	0.0357	0.0479	0.0423	0.0421	0.0532	0.0513	0.0521	0.0547	0.0627	14.63%
	R@20	0.0575	0.0754	0.0663	0.0660	0.0824	0.0803	0.0772	0.0850	0.0992	16.71%
	N@10	0.0192	0.0257	0.0223	0.0220	0.0282	0.0278	0.0289	0.0292	0.0330	13.01%
	N@20	0.0249	0.0328	0.0284	0.0282	0.0358	0.0352	0.0354	0.0370	0.0424	14.59%
Sports	R@10	0.0432	0.0569	0.0558	0.0401	0.0599	0.0588	0.0663	0.0620	0.0717	15.65%
	R@20	0.0653	0.0864	0.0856	0.0636	0.0919	0.0899	0.0990	0.0953	0.1089	14.27%
	N@10	0.0241	0.0311	0.0307	0.0209	0.0330	0.0324	0.0365	0.0335	0.0385	14.93%
	N@20	0.0298	0.0387	0.0384	0.0270	0.0413	0.0404	0.0450	0.0421	0.0481	14.25%

Datasets	Baby								
Metrics	R@10	R@20	N@10	N@20					
BPR	0.0379	0.0607	0.0202	0.0261					
LightGCN	0.0464	0.0732	0.0251	0.0320					
SGL	0.0532	0.0820	0.0289	0.0363					
NCL	0.0538	0.0836	0.0292	0.0369					
HCCF	0.0480	0.0756	0.0259	0.0332					
SHT	0.0470	0.0748	0.0256	0.0329					
VBPR	0.0424	0.0663	0.0223	0.0284					
MMGCN	0.0398	0.0649	0.0211	0.0275					
GRCN	0.0531	0.0835	0.0291	0.0370					
LATTICE	0.0536	0.0858	0.0287	0.0370					
MMGCL	0.0522	0.0778	0.0289	0.0355					
MICRO	0.0570	0.0905	0.0310	0.0406					
SLMRec	0.0540	0.0810	0.0296	0.0361					
BM3	0.0538	0.0857	0.0301	0.0378					
LGMRec	0.0644*	0.1002*	0.0349*	0.0440*					
Improv.	12.98%	10.72%	12.58%	8.37%					

However, is that always the case?



Multimodal data quality can influence the expressiveness and performance of these recommendation models!!



Data-quality issues in multimodal recommendation

NOISY
MULTIMODAL DATA

INCOMPLETE OR MISSING MULTIMODAL DATA

BIAS IN
MULTIMODAL DATA

PREFERENCE
MISALIGNMENT ACROSS
MODALITIES

FAIRNESS ISSUES IN MULTIMODAL RECOMMENDATION

DaQuaMRec aims to discuss all these aspects, in a dedicated forum at ACM RecSys 2025



The organizing committee



Claudio Pomo Politecnico di Bari Italy



Dietmar Jannach University of Klagenfurt Austria



Yubin Kim Vody, Inc. USA



Daniele Malitesta Université Paris-Saclay France



Alberto Carlo Maria Mancino Politecnico di Bari Italy



Julian McAuley UC San Diego USA



Alessandro B. Melchiorre Criteo France



Shah Nawaz J. Kepler Universität Linz Austria

Accepted contributions

- [LONG] G. Rippberger and J. Neidhardt. *Comparative Analysis of Fashion Captioning for Multimodal Fashion Recommendation*
- [POSITION] Z. Wang, W. Höpken, and D. Jannach. *Data Quality Challenges in Multimodal Tourism Recommender Systems*
- [POSITION] M. Valentini, A. Ferrara, and T. Di Noia. Exploring the Impact of Data Quality on Agentic Recommender Systems
- [POSITION] E. Purificato. Inside the Frame: A Plan for Audio-Visual Feature Analysis of Video Recommendations for Children
- [INVITED FROM RECSYS'25] S. Malani, Y. Zhang, L. Liu. *Minimize Negative Experiences in Video Recommendation Systems with Multimodal Large Language Models*

Program committee

- Aditya Chichani (Walmart)
- Marta Moscati (Johannes Kepler University Linz)
- Roger Zhe Li (Huawei)
- Salvatore Bufi (Politecnico di Bari)
- Alejandro Bellogin (Universidad Autonoma de Madrid)
- Bruno Sguerra (Deezer Research)
- Giandomenico Cornacchia (Amazon)
- Matteo Attimonelli (Politecnico di Bari)
- Tracy Holloway King (Adobe)
- Felice Antonio Merra (Cognism)

Workshop program (1/2)

15:30 - 16:00 Coffee Break

Workshop program (2/2)

16:00 - 16:35 Invited Talk: Marta Moscati (*JKU Linz*)

Title: Single-Branch Architectures for Recommendation

Session chair: Alessandro B. Melchiorre

16:35 - 17:05 Paper Session 2

- ♦ Z. Wang, W. Höpken, and D. Jannach. Data Quality Challenges in Multimodal Tourism Recommender Systems [PDF]
- M. Valentini, A. Ferrara, and T. Di Noia. Exploring the Impact of Data Quality on Agentic Recommender Systems [PDF]
- E. Purificato. Inside the Frame: A Plan for Audio-Visual Feature Analysis of Video Recommendations for Children [PDF]
- S. Malani, Y. Zhang, L. Liu. Minimize Negative Experiences in Video Recommendation Systems with Multimodal Large Language Models [In

Proceedings of ACM RecSys 2025]

Session chair: Dietmar Jannach

17:05 - 17:30 Discussion Panel + Closing Remarks

Moderator: Yubin Kim (Vody, Inc)

Panelists: Olivier Jeunen (Aampe), Henrik Lindström (Spotify Sweden), Suman Malani (Google, Inc)

Keynotes and invited talks



Aixin Sun (*NTU Singapore*)



Malte Lichtenberg (*Albatross AI*)



Marta Moscati (*JKU Linz*)

Discussion panel



Yubin Kim (*Vody, Inc*)
Moderator



Olivier Jeunen (*Aampe*)

Panelist



Suman Malani (*Google, Inc*)

Panelist



Henrik Lindström (*Spotify Sweden*)

Panelist

Keynote talk #1



Aixin Sun (NTU Singapore)

Multimodality in
Recommender Systems:
Does It Help, and Should
We Expect an Answer?

Keynote talk #2



Malte Lichtenberg (Albatross AI)

Sequential Recommenders and Multimodal Inputs:
Mitigating Data Quality
Issues in Industry-scale
Recommenders

Paper session #1

Coffee Break (we'll resume at 16:00)



Invited talk



Single-Branch Architectures for Recommendation

Marta Moscati (JKU Linz)

Paper session #2

Discussion panel

Discussion panel



Yubin Kim (*Vody, Inc*)
Moderator



Olivier Jeunen (*Aampe*)

Panelist



Suman Malani (*Google, Inc*)

Panelist



Henrik Lindström (*Spotify Sweden*)

Panelist

Closing remarks

CEUR Workshop proceedings coming soon



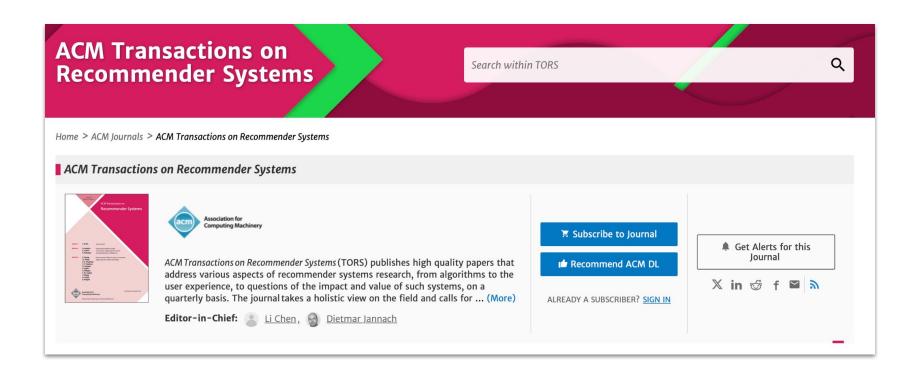
CEUR Workshop Proceedings (CEUR-WS.org) is a free, diamond open-access publication service at Sun SITE Central Europe operated under the umbrella of RWTH Aachen University and listed in the Bielefeld ISSN-GOLD-OA dataset. CEUR-WS.org is a recognized ISSN publication series, ISSN 1613-0073 (json). CEUR-WS.org is hosted at http://SunSITE.Informatik.RWTH-Aachen.DE/Publications/CEUR-WS/. This service is provided by the CEUR-WS.org Team. See end of the page for contact details and Impressum.

CEUR-WS.org Team | FAQ | How to submit | GenAl Policy | AlxIA Series | IAOA Series | Blog | Long-term archive |

CEUR Workshop Proceedings (CEUR-WS.org)

Free Open-Access Proceedings for Computer Science Workshops

Upcoming Special Issue at ACM TORS



Thanks a lot! See you next year...

but where?

If you want to take part to the workshop organization in the future, get in touch with us!!