

**MA Yunshan**

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**Education**

PhD, National University of Singapore, Singapore, 2022

Bachelor of Engineering, Beijing University of Posts & Telecommunications, China, 2015

**Academic Appointments**

Assistant Professor of Computer Science, School of Computing and Information Systems, SMU, Jan 2025 - Present

**RESEARCH**

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**Publications**Journal Articles [Refereed]

MultiCBR: Multiview contrastive learning for bundle recommendation, by MA, Yunshan; HE, Yingzhi; WANG, Xiang; WEI, Yinwei; DU, Xiaoyu; FU, Yuyangzi; CHUA, TatSeng. (2024). *ACM Transactions on Information Systems*, 42 (4), 1-23. (Published)

Website owner identification through multi-level contrastive representation learning, by TU, Cheng; MA, Yunshan; LI, Yang; ZHANG, Min; HU, Miao; SHI, Fan; WANG, Xiang. (2025). *ACM Transactions on Knowledge Discovery from Data*, 19 (9), 1-39. <https://doi.org/10.1145/3767155> (Published)

AttackKG+: Boosting attack graph construction with large language models, by ZHANG, Yongheng; DU, Tingwen; MA, Yunshan; WANG, Xiang; XIE, Yi; YANG, Guozheng; LU, Yuliang; CHANG, EeChien. (2025). *Computers and Security*, 150 1-16. (Published)

Enhancing itemlevel bundle representation for bundle recommendation, by DU, Xiaoyu; QIAN, Kun; MA, Yunshan; XIANG, Xinguang. (2025). *ACM Transactions on Recommender Systems*, 3 (3), 1-21. <https://doi.org/10.1145/3637067> (Published)

Rule-guided counterfactual explainable recommendation, by WEI, Yinwei; QU, Xiaoyang; WANG, Xiang; MA, Yunshan; NIE, Liqiang; CHUA, TatSeng. (2024). *IEEE Transactions on Knowledge and Data Engineering*, 36 (5), 2179-2190. <https://doi.org/10.1109/TKDE.2023.3322227> (Published)

Filter-based stance network for rumor verification, by LI, Jun; BIN, Yi; MA, Yunshan; YANG, Yang; HUANG, Zi; CHUA, TatSeng. (2024). *ACM Transactions on Information Systems*, 42 (4), 1-28. (Published)

Causal disentangled recommendation against user preference shifts, by WANG, Wenjie; LIN, Xinyu; WANG, Liuhui; FENG, Fuli; MA, Yunshan; CHUA, TatSeng. (2024). *ACM Transactions on Information Systems*, 42 (1), 1-27. <https://doi.org/10.1145/3593022> (Published)

A learningbased approach for estimating inertial properties of unknown objects from encoder discrepancies, by LAO, Zizhou; HAN, Yuanfeng; MA, Yunshan; CHIRIKJIAN, Gregory S.. (2023). *IEEE Robotics and Automation Letters*, 8 (9), 5283-5290. (Published)

Personalized fashion outfit generation with user coordination preference learning, by DING, Yujuan; MOK, P.Y.; MA, Yunshan; BIN, Yi. (2023). *Information Processing and Management*, 60 (5), 1-18. (Published)

Modeling instant user intent and contentlevel transition for sequential fashion recommendation, by DING, Yujuan; MA, Yunshan; WONG, Wai Keung; CHUA, TatSeng. (2021). *IEEE Transactions on Multimedia*, 24 2687-2700. (Published)

### Conference Proceedings

International workshop on multimodal generative search and recommendation (MMGenSR@CIKM 2025), by BIN, Yi; LI, Haoxuan; MA, Haokai; ZHANG, Yang; WANG, Wenjie; MA, Yunshan; YANG, Yang; CHUA, TatSeng. (2025.0). *CIKM '25: Proceedings of the 34th ACM International Conference on Information and Knowledge Management, Seoul, Korea, November 10-14*, (pp. 6890-6893) New York : ACM. <https://doi.org/10.1145/3746252.3761597> (Published)

GenWardrobe: A fully generative system for travel fashion wardrobe construction, by JIN, Peng; WEN, Yilin; YU, Mingzhe; MA, Yunshan; ZHENG, Rong; FAN, Jintu; NGO, Chong Wah. (2025.0). *MM '25: Proceedings of the 33rd ACM International Conference on Multimedia, Dublin, Ireland, October 27-31*, (pp. 13540-13542) New York: ACM. <https://doi.org/10.1145/3746027.3754483> (Published)

VibeMus: Proactive agentic system for music personalization, by GUO, Zhiliang; TU, Teng; MA, Yunshan; YANG, Xun. (2025.0). *MMAsia '25: Proceedings of the 7th ACM International Conference on Multimedia in Asia, Kuala Lumpur, Malaysia, December 9-12*, (pp. 1-3) New York : ACM. <https://doi.org/10.1145/3743093.3771663> (Published)

LLM2Rec: Large language models are powerful embedding models for sequential recommendation, by HE, Yingzhi; LIU, Xiaohao; ZHANG, An; MA, Yunshan; CHUA, TatSeng. (2025.0). *KDD '25: Proceedings of the 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining V.2, Toronto, Canada, August 3-7*, (pp. 896-907) New York : ACM. <https://doi.org/10.1145/3711896.3737029> (Published)

Finetuning multimodal large language models for product bundling, by LIU, Xiaohao; WU, Jie; TAO, Zhulin; MA, Yunshan; WEI, Yinwei; CHUA, Tat-Seng. (2025.0). *KDD '25: Proceedings of the 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining V.2, Toronto, Canada, August 3-7*, (pp. 848-858) New York : ACM. (Published)

FinIR: The 2nd workshop on financial information retrieval in the era of generative AI, by ZHU, Fengbin; MA, Yunshan; FENG, Fuli; WANG, Chao; LUAN, Huanbo; YE, Guangnan; ZHANG, Shuo; MEHTA, Dhagash; CHEN, Pingping; XIANG, Bing; CHUA, TatSeng. (2025.0). *SIGIR '25: Proceedings of the 48th International ACM SIGIR Conference on Research and Development in Information Retrieval, Padua, Italy, July 13-18*, (pp. 4184-4187) New York : ACM. <https://doi.org/10.1145/3726302.3730366> (Published)

FashionDPO: Finetune fashion outfit generation model using direct preference optimization, by YU, Mingzhe; MA, Yunshan; WU, Lei; WANG, Changshuo; LI, Xue; MENG, Lei. (2025.0). *SIGIR '25: Proceedings of the 48th International ACM SIGIR Conference on Research and Development in Information Retrieval, Padua, Italy, July 13-18*, (pp. 212-222) New York : ACM. <https://doi.org/10.1145/3726302.3729976> (Published)

AlphaEdit: Null-space constrained knowledge editing for language models, by FANG, Junfeng; JIANG, Houcheng; WANG, Kun; MA, Yunshan; SHI, Jie; WANG, Xiang; HE, Xiangnan; CHUA, TatSeng. (2025.0). *Proceedings of the 13th International Conference on Learning Representations (ICLR 2025), Singapore, April 24-28*, (pp. 1-32) Singapore: ICLR. (Published)

MMForecast: A multimodal approach to temporal event forecasting with large language models, by LI, Haoxuan; YANG, Zhengmao; MA, Yunshan; BIN, Yi; YANG, Yang; CHUA, Tat-Seng. (2024.0). *MM '24: The 32nd ACM International Conference on Multimedia, Melbourne, Australia, October 28 - November 1*, (pp. 2776-2785) New York : ACM. <https://doi.org/10.1145/3664647.3681593> (Published)

CIRP: Crossitem relational pretraining for multimodal product bundling, by MA, Yunshan; HE, Yingzhi; ZHONG, Wenjun; WANG, Xiang; ZIMMERMANN, Roger; CHUA, Tat-Seng. (2024.0). *MM '24: The 32nd ACM International Conference on Multimedia, Melbourne, Australia, October 28 - November 1*, (pp. 9641-9649)

New York : ACM. <https://doi.org/10.1145/3664647.3681349> (Published)

LARP: Language audio relational pretraining for coldstart playlist continuation, by SALGANIK, Rebecca; LIU, Xiaohao; MA, Yunshan; KANG, Jian; CHUA, TatSeng. (2024.0). *KDD '24: The 30th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Barcelona, Spain, August 25-29*, (pp. 2524-2535) New York : ACM. <https://doi.org/10.1145/3637528.3671772> (Published)

Diffusion models for generative outfit recommendation, by XU, Yiyang; WANG, Wenjie; FENG, Fuli; MA, Yunshan; ZHANG, Jizhi; HE, Xiangnan. (2024.0). *SIGIR '24: Proceedings of the 47th International ACM SIGIR Conference on Research and Development in Information Retrieval, Washington, USA, July 14-18*, (pp. 1350-1359) New York : ACM. (Published)

Smart fitting room: A onestop framework for matching-aware virtual tryon, by YU, Mingzhe; MA, Yunshan; WU, Lei; CHENG, Kai; LI, Xue; MENG, Lei; CHUA, Tat-Seng. (2024.0). *ICMR '24: International Conference on Multimedia Retrieval, Phuket, Thailand, June 10-14*, (pp. 184-192) New York : ACM. <https://doi.org/10.1145/3652583.3658064> (Published)

FashionReGen: LLM-powered fashion report generation, by DING, Yujuan; MA, Yunshan; FAN, Wenqi; YAO, Yige; CHUA, TatSeng; LI, Qing. (2024.0). *WWW '24: The ACM Web Conference 2024, Singapore, May 13-17*, (pp. 991-994) New York : ACM. <https://doi.org/10.1145/3589335.3651232> (Published)

Learning to generate explainable stock predictions using self-reflective large language models, by KOA, Kelvin J.L.; MA, Yunshan; NG, Ritchie; CHUA, TatSeng. (2024.0). *WWW '24: The ACM Web Conference 2024, Singapore, May 13-17*, (pp. 4304-4315) New York : ACM. <https://doi.org/10.1145/3589334.3645611> (Published)

Hop-based heterogeneous graph transformer, by YANG, Zixuan; WANG, Xiao; YU, Yanhua; WANG, Yuling; LU, Kangkang; GUO, Zirui; QIN, Xiting; MA, Yunshan; CHUA, TatSeng. (2024.0). *WWW '20: The Web Conference 2020, Taipei, Taiwan, April 20-24, 2020*, (pp. 2346-2353) New York : ACM. <https://doi.org/10.1145/3366423.3380027> (Published)

Leveraging multimodal features and item-level user feedback for bundle construction, by MA, Yunshan; LIU, Xiaohao; WEI, Yinwei; TAO, Zhulin; WANG, Xiang; CHUA, TatSeng. (2024.0). *WSDM '24: The 17th ACM International Conference on Web Search and Data Mining, Merida, Mexico, March 4-8*, (pp. 510-519) New York : ACM. <https://doi.org/10.1145/3616855.3635854> (Published)

FLOOD: A flexible invariant learning framework for out-of-distribution generalization on graphs, by LIU, Yang; AO, Xiang; FENG, Fuli; MA, Yunshan; LI, Kuan; CHUA, TatSeng; HE, Qing. (2023.0). *KDD '23: Proceedings of the 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Long Beach, CA, USA, August 6-10*, (pp. 1548-1558) New York : ACM. <https://doi.org/10.1145/3580305.3599355> (Published)

Diffusion variational autoencoder for tackling stochasticity in multi-step regression stock price prediction, by KOA, Kelvin J.L.; MA, Yunshan; NG, Ritchie; CHUA, TatSeng. (2023.0). *KDD '25: Proceedings of the 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining V.2, Toronto, Canada, August 3-7*, (pp. 1087-1096) New York : ACM. <https://doi.org/10.1145/3583780.3614844> (Published)

Strategy-aware bundle recommender system, by WEI, Yinwei; LIU, Xiaohao; MA, Yunshan; WANG, Xiang; NIE, Liqiang; CHUA, TatSeng. (2023.0). *SIGIR '23: The 46th International ACM SIGIR Conference on Research and Development in Information Retrieval, Taipei, Taiwan, July 23-27*, (pp. 1198-1207) New York : ACM. <https://doi.org/10.1145/3539618.3591771> (Published)

CrossCBR: Cross-view contrastive learning for bundle recommendation, by MA, Yunshan; HE, Yingzhi; ZHANG, An; WANG, Xiang; CHUA, Tat-Seng. (2022.0). *KDD '22: The 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Washington, USA, August 14-18*, (pp. 1233-1241) New York : ACM. <https://doi.org/10.1145/3534678.3539229> (Published)

Leveraging two types of global graph for sequential fashion recommendation, by DING, Yujuan; MA, Yunshan; WONG, Wai Keung; CHUA, TatSeng. (2021.0). *ICMR '21: International Conference on Multimedia Retrieval, Taipei, Taiwan, August 21-24*, (pp. 73-81) New York : ACM. <https://doi.org/10.1145/3460426.3463638> (Published)

Who, where, and what to wear?: extracting fashion knowledge from social media, by MA, Yunshan; YANG, Xun; LIAO, Lizi; CAO, Yixin; CHUA, Tat-Seng. (2019.0). *Proceedings of the 27th ACM International Conference on Multimedia, Nice, France, 2019 October 21 - 25*, (pp. 257-265) New York, NY, United States: Association for Computing Machinery. <https://doi.org/10.1145/3343031.3350889> (Published)

Interpretable fashion matching with rich attributes, by YANG, Xun; HE, Xiangnan; WANG, Xiang; MA, Yunshan; FENG, Fuli; WANG, Meng; CHUA, TatSeng. (2019.0). *SIGIR'19: Proceedings of the 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval, Paris, France July 21-25*, (pp. 775-784) New York : ACM. <https://doi.org/10.1145/3331184.3331242> (Published)

## Research Grants

### Singapore Management University

General Multimodal Event Forecasting via Large Foundation Models, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): MA Yunshan, 2025, S\$120,000

## TEACHING

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### Courses Taught

#### Singapore Management University

Undergraduate Programmes :

Data Management

Postgraduate Research Programmes :

Empirical Research Project 1

Empirical Research Project 4