Xun Wang

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Scholar: https://scholar.google.com/citations?user=-N8Y3GEAAAAJ

Education

M.S. in Probability and Mathematical Statistics *Sept. 2015 - June 2018*
Sun Yat-Sen University

B.S. in Mathematics and Applied Mathematics *Sept. 2009 - July 2013*
Beijing Normal University

Experience

Research Scientist at ByteDance Ltd. *July 2022 - present*

Seed Foundation: Designed the best distributed data loader in the Seed Team. Bit-wise Resume with extremely efficient ckpt. The corest contributer for code bases of multimodal understanding and generation.

Seed Research: Project Lead for Natural Language/Vision control for image generation / editing.

Research Engineer at Malong Tech *July 2018 - July 2020*

Research:

Designed Multi-Similarity Loss (CVPR 2019) and Cross-Batch Memory (CVPR 2020) for Deep Metric Learning and Image Retrieval.

Projects:

MS-Loss and XBM have been successfully applied to multiple real-world projects on Retail applications, with significant performance improvements, including (1) a world-leading Access Protect system which can accurately search and verify 300K categories of products has been developed in Walmart stores; (2) an online product search system used by more than 100K customers.

Publications

Xun Wang (as a core contributor) "Seedream 2.0: A Native Chinese-English Bilingual Image Generation Foundation Model," Seed Tech Report, 2025. [**SoTA Image Generation**].

Xun Wang, H. Zhang, W. Huang, M. R. Scott "Cross-Batch Memory for Embedding Learning," In CVPR, 2020. [Code] [**Oral & Best Paper Nomination**].

Xun Wang, X. Han, W. Huang, D. Dong and M. R. Scott, "Multi-Similarity Loss with General Pair Weighting for Deep Metric Learning," In CVPR, 2019. [**600 citations**] [Code].

Xun Wang, B Ke, X Li, F Liu, M Zhang, X Liang, Q Xiao, "Modality-Balanced Embedding for Video Retrieval," In SIGIR, 2022.

Tengteng Huang, Yifan Sun, **Xun Wang**, Haotian Yao, Chi Zhang, "Spatial Ensemble: a Novel Model Smoothing Mechanism for Student-Teacher Framework," In NeurIPS, 2021.

Fangyu Liu*, Rongtian Ye*, **Xun Wang***, Shuaipeng Li, "HAL: Improved Text-Image Matching by Mitigating Visual Semantic Hubs," In AAAI, 2020. (Equal Contribution)

Research Interests

Multimodal Understanding	Published one paper.
Deep Metric Learning	Published several papers.
Self-supervised Representation Learning	co-author of one paper.

Honors and Awards

Cycling 1300KM from Beijing to Nanjing individually (spent less than 300$) *2010*

2nd place in 1500M Race of School Athletic *2016*

Best Paper Nomination in CVPR 2020 *2020*

Skills

Mathematical Tools: ***Linear Algebra, Calculus, Probability and Statistics***

Programming Languages: Python, PyTorch

Operating Systems: Linux, MacOS, Windows

References

Dr. Weilin Huang: weilin.hwl@alibaba-inc.com

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