

CONTACT INFORMATION	NANYANG TECHNOLOGICAL UNIVERSITY (NTU), SINGAPORE E-MAIL: jaehong.yoon@ntu.edu.sg LINKS: HOMEPAGE , GOOGLE SCHOLAR , TWITTER	
RESEARCH INTERESTS	My long-term research vision centers on developing continually adaptable and trustworthy multi-modal AI systems. To this end, I aim to: (1) enable seamless and scalable continual integration of diverse tasks, datasets, and modalities to support long-term generalization, (2) facilitate efficient and robust adaptation to novel data distributions and dynamically changing environments even after model deployment, and (3) ensure high reliability, safety, and faithfulness in multimodal learning, both in reasoning and generation under real-world conditions.	
PROFESSIONAL EXPERIENCE	Assistant Professor, Nanyang Technological University, Singapore The College of Computing and Data Science (CCDS)	08/2025 - Current
	Postdoctoral Research Associate, UNC Chapel-Hill, NC Mentor: Prof. Mohit Bansal	08/2023 - 08/2025
	Postdoctoral Research Associate, KAIST, South Korea Mentor: Prof. Sung Ju Hwang	03/2023 - 08/2023
	Visiting Student, Weizmann Institute of Science, Israel Host: Prof. Yonina Eldar	10/2022 - 11/2022
	Research Intern, Microsoft Research, China Visual Computing Group Mentor: Dr. Yue Cao	11/2021 - 04/2022
	Research Scientist, MLAI Lab., KAIST, South Korea	02/2018 - 08/2018
EDUCATION	KAIST , Daejeon, South Korea Ph.D., School of Computing, Aug 2018 - Feb 2023 <ul style="list-style-type: none"> • Thesis: <i>"On-device, Online Continual Learning for the Real World"</i> • The Best Ph.D. Dissertation Award from KAIST College of Engineering • The Best Ph.D. Dissertation Award from KAIST School of Computing • Machine Learning and Artificial Intelligence (MLAI) Lab • Adviser: Prof. Sung Ju Hwang • Area of Study: Machine Learning UNIST , Ulsan, South Korea M.S., Computer Science, Aug 2016 - Feb 2018 <ul style="list-style-type: none"> • Thesis: <i>"Combined Group and Exclusive Sparsity for Deep Neural Networks"</i> • Adviser: Prof. Sung Ju Hwang • Area of Study: Machine Learning B.S., Computer Science Engineering, Mar 2012 - Aug 2016 <ul style="list-style-type: none"> • Biological Science Minor 	
JOURNAL PUBLICATIONS	[J2] <i>Reliable and Responsible Foundation Models</i> Xinyu Yang, Junlin Han, Rishi Bommasani, Jinqi Luo, ..., Jaehong Yoon , et al. Transactions on Machine Learning Research (TMLR 2025)	
	[J1] <i>Continual Learning: Forget-free Winning Subnetworks for Video Representations</i> Haeyong Kang, Jaehong Yoon , Sung Ju Hwang, and Chang D. Yoo IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI 2024), IF: 20.8	

- [C37] *Frame Guidance: Training-Free Guidance for Frame-Level Control in Video Diffusion Models*
Sangwon Jang, Taekyung Ki, Jaehyeong Jo, [Jaehong Yoon](#), Soo Ye Kim, Zhe Lin, and Sung Ju Hwang
International Conference on Learning Representations ([ICLR](#)) **2026**, Rio de Janeiro, Brazil
- [C36] *TrustGen: A Platform of Dynamic Benchmarking on the Trustworthiness of Generative Foundation Models*
Yue Huang, Chujie Gao, Siyuan Wu, Haoran Wang, ..., [Jaehong Yoon](#) et al.
International Conference on Learning Representations ([ICLR](#)) **2026**, Rio de Janeiro, Brazil
- [C35] *DART: Leveraging Multi-Agent Disagreement for Tool Recruitment in Multi-modal Reasoning*
Fengli Wu, Vaidehi Patil, [Jaehong Yoon](#), Yue Zhang, and Mohit Bansal
Conference of the European Chapter of the Association for Computational Linguistics ([EACL](#)) **2026**, Rabat, Morocco
- [C34] *DreamRunner: Fine-Grained Storytelling Video Generation with Retrieval-Augmented Motion Adaptation*
Zun Wang, Jialu Li, Han Lin, [Jaehong Yoon](#), and Mohit Bansal
The AAAI Conference on Artificial Intelligence ([AAAI](#)) **2026**, Singapore
- [C33] *Video-RTS: Rethinking Reinforcement Learning and Test-Time Scaling for Efficient and Enhanced Video Reasoning*
Ziyang Wang*, [Jaehong Yoon*](#), Shoubin Yu, Md Mohaiminul Islam, Gedas Bertasius, and Mohit Bansal
Conference on Empirical Methods in Natural Language Processing ([EMNLP](#)) **2025**, Suzhou, China
- [C32] *RACCooN: A Versatile Instructional Video Editing Framework with Auto-Generated Narratives*
[Jaehong Yoon*](#), Shoubin Yu*, and Mohit Bansal
NeurIPS 2024 Workshop on Video-Language Models
Conference on Empirical Methods in Natural Language Processing ([EMNLP](#)) **2025**, Suzhou, China
- [C31] *Glider: Global and Local Instruction-Driven Expert Router*
Pingzhi Li*, Prateek Yadav*, [Jaehong Yoon](#), Jie Peng, Yi-Lin Sung, Mohit Bansal, and Tianlong Chen
Conference on Empirical Methods in Natural Language Processing ([EMNLP](#)) **2025**, Suzhou, China
- [C30] *Video-Skill-CoT: Skill-based Chain-of-Thoughts for Domain-Adaptive Video Reasoning*
Daeun Lee*, [Jaehong Yoon*](#), Jaemin Cho, and Mohit Bansal
Conference on Empirical Methods in Natural Language Processing ([EMNLP Findings](#)) **2025**, Short Paper, Suzhou, China
- [C29] *MEXA: Towards General Multimodal Reasoning with Dynamic Multi-Expert Aggregation*
Shoubin Yu*, Yue Zhang*, Ziyang Wang, [Jaehong Yoon](#), and Mohit Bansal
Conference on Empirical Methods in Natural Language Processing ([EMNLP Findings](#)) **2025**, Suzhou, China
- [C28] *VideoTree: Adaptive Tree-based Video Representation for LLM Reasoning on Long Videos*
Ziyang Wang*, Shoubin Yu*, Elias Stengel-Eskin*, [Jaehong Yoon](#), Feng Cheng, Gedas Bertasius, Mohit Bansal
The IEEE/CVF Computer Vision and Pattern Recognition Conference ([CVPR](#)) **2025**, Nashville, TN

- [C27] *SAFREE: Training-Free and Adaptive Guard for Safe Text-to-Image And Video Generation*
[Jaehong Yoon*](#), Shoubin Yu*, Vaidehi Patil, Huaxiu Yao, and Mohit Bansal
 International Conference on Learning Representations (ICLR) 2025, Singapore
- [C26] *Adapt- ∞ : Scalable Lifelong Multimodal Instruction Tuning via Dynamic Data Selection*
 Adyasha Maharana*, [Jaehong Yoon*](#), Tianlong Chen, and Mohit Bansal
 International Conference on Learning Representations (ICLR) 2025, Singapore
- [C25] *CREMA: Generalizable and Efficient Video-Language Reasoning via Multimodal Modular Fusion*
 Shoubin Yu*, [Jaehong Yoon*](#), and Mohit Bansal
 International Conference on Learning Representations (ICLR) 2025, Singapore
- [C24] *SELMA: Learning and Merging Skill-Specific Text-to-Image Experts with Auto-Generated Data*
 Jialu Li, Jaemin Cho, Yi-lin Sung, [Jaehong Yoon](#), and Mohit Bansal
 Neural Information Processing Systems (NeurIPS) 2024, Vancouver, Canada
- [C23] *EnvGen: Generating and Adapting Environments via LLMs for Training Embodied Agents*
 Abhay Zala*, Jaemin Cho*, Han Lin, [Jaehong Yoon](#), and Mohit Bansal
 Conference on Language Modeling (COLM) 2024, Philadelphia, PA
- [C22] *Mementos: A Comprehensive Benchmark for Multimodal Large Language Model Reasoning over Image Sequences*
 Xiyao Wang, Yuhang Zhou, Xiaoyu Liu, Hongjin Lu, Yuancheng Xu, Feihong He, [Jaehong Yoon](#), Taixi Lu, Gedas Bertasius, Mohit Bansal, Huaxiu Yao, and Furong Huang
 Annual Meeting of the Association for Computational Linguistics (ACL) 2024, Bangkok, Thailand
- [C21] *STELLA: Continual Audio-Video Pre-training with Spatio-Temporal Localized Alignment*
 Jaewoo Lee*, [Jaehong Yoon*](#), Wonjae Kim, Yunji Kim, and Sung Ju Hwang
 CVPR 2024 Workshop on Continual Learning (CLVision)
 International Conference on Machine Learning (ICML) 2024, Vienna, Austria
- [C20] *EVEREST: Efficient Masked Video Autoencoder by Removing Redundant Spatiotemporal Tokens*
 Sunil Hwang*, [Jaehong Yoon*](#), Youngwan Lee*, and Sung Ju Hwang
 CVPR 2024 Workshop on Transformers for Vision (T4V), [Spotlight Presentation](#)
 International Conference on Machine Learning (ICML) 2024, Vienna, Austria
- [C19] *BECofTTA: Input-dependent Online Blending of Experts for Continual Test-time Adaptation*
 Daeun Lee*, [Jaehong Yoon*](#), and Sung Ju Hwang
 CVPR 2024 Workshop on Test-Time Adaptation
 International Conference on Machine Learning (ICML) 2024, Vienna, Austria
- [C18] *Carpe Diem: On the Evaluation of World Knowledge in Lifelong Language Models*
 Yujin Lee, [Jaehong Yoon](#), Seonghyeon Ye, Sangmin Bae, Namgyu Ho, Sung Ju Hwang, and Se Young Yun
 NeurIPS 2023 Workshop on Synthetic Data Generation with Generative AI, [Oral](#)
 The North American Chapter of the Association for Computational Linguistics (NAACL) 2024, Mexico City, Mexico
- [C17] *Multimodal Representation Learning by Alternating Unimodal Adaptation*
 XiaoHui Zhang, [Jaehong Yoon](#), Mohit Bansal, and Huaxiu Yao
 The IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR) 2024, Seattle, Washington

- [C16] *ECoFLaP: Efficient Coarse-to-Fine Layer-Wise Pruning for Vision-Language Models*
Yi-lin Sung, [Jaehong Yoon](#), and Mohit Bansal
International Conference on Learning Representations (ICLR) 2024, Vienna, Austria
- [C15] *Analyzing and Mitigating Object Hallucination in Large Vision-Language Models*
Yiyang Zhou*, Chenhang Cui*, [Jaehong Yoon](#), Linjun Zhang, Chelsea Finn, Mohit Bansal, and Huaxiu Yao
NeurIPS 2023 Workshop on Instruction Tuning and Instruction Following
International Conference on Learning Representations (ICLR) 2024, Vienna, Austria
- [C14] *Progressive Fourier Neural Representation for Sequential Video Compilation*
Haeyong Kang, [Jaehong Yoon](#), Dahyun Kim, Sung Ju Hwang, and Chang D. Yoo
International Conference on Learning Representations (ICLR) 2024, Vienna, Austria
- [C13] *Text-Guided Token Selection for Text-to-Image Synthesis with Token-based Diffusion Models*
Jaewoong Lee*, Sangwon Jang*, Jaehyeong Jo, [Jaehong Yoon](#), Yunji Kim, Jin-Hwa Kim, Jung-Woo Ha, Sung Ju Hwang
International Conference on Computer Vision (ICCV) 2023, Paris, France
- [C12] *Continual Learners are Incremental Model Generalizers*
[Jaehong Yoon](#), Sung Ju Hwang, Yue Cao
International Conference on Machine Learning (ICML) 2023, Hawaii, USA
- [C11] *Personalized Subgraph Federated Learning*
Jinheon Baek*, Wonyong Jeong*, Jiongdao Jin, [Jaehong Yoon](#), and Sung Ju Hwang
International Conference on Machine Learning (ICML) 2023, Hawaii, USA
- [C10] *On the Soft-Subnetwork for Few-shot Class Incremental Learning*
Haeyong Kang, [Jaehong Yoon](#), Sultan Madjid, Sung Ju Hwang, Chang D. Yoo
International Conference on Learning Representations (ICLR) 2023, Kigali, Rwanda
- [C9] *Bitwidth Heterogeneous Federated Learning with Progressive Weight Dequantization*
[Jaehong Yoon*](#), Geon Park*, Wonyong Jeong, and Sung Ju Hwang
International Conference on Machine Learning (ICML) 2022, Baltimore, MD
- [C8] *Forget-free Continual Learning with Winning Subnetworks*
Haeyong Kang*, Rusty Mina*, Sultan Madjid, [Jaehong Yoon](#), Mark Hasegawa-Johnson, Sung Ju Hwang, and Chang D. Yoo
International Conference on Machine Learning (ICML) 2022, Baltimore, MD
- [C7] *Rethinking the Representational Continuity: Towards Unsupervised Continual Learning*
Divyam Madaan, [Jaehong Yoon](#), Yuanchun Li, Yunxin Liu, and Sung Ju Hwang
International Conference on Learning Representations (ICLR) 2022, Virtual
Oral Presentation (Acceptance Rate = 54/3391 = 1.6%)
- [C6] *Online Coreset Selection for Rehearsal-based Continual Learning*
[Jaehong Yoon](#), Divyam Madaan, Eunho Yang, and Sung Ju Hwang
International Conference on Learning Representations (ICLR) 2022, Virtual
- [C5] *Federated Continual Learning with Weighted Inter-client Transfer*
[Jaehong Yoon*](#), Wonyong Jeong*, Giwoong Lee, Eunho Yang, and Sung Ju Hwang
ICML 2020 Workshop on Lifelong Machine Learning Workshop
International Conference on Machine Learning (ICML) 2021, Virtual
- [C4] *Federated Semi-supervised Learning with Inter-Client Consistency & Disjoint Learning*
Wonyong Jeong, [Jaehong Yoon](#), Eunho Yang, and Sung Ju Hwang
ICML 2020 Workshop on Federated Learning for User Privacy and Data Confidentiality Workshop, **Long Presentation, Best Student Paper Award**
International Conference on Learning Representations (ICLR) 2021, Virtual

- [C3] *Scalable and Order-robust Continual Learning with Additive Parameter Decomposition*
[Jaehong Yoon](#), Saehoon Kim, Eunho Yang, and Sung Ju Hwang
 International Conference on Learning Representations (**ICLR**) 2020, Addis ababa, Ethiopia, Virtual
- [C2] *Lifelong Learning with Dynamically Expandable Networks*
[Jaehong Yoon](#), Eunho Yang, Jeongtae Lee, and Sung Ju Hwang
 International Conference on Learning Representations (**ICLR**) 2018, Vancouver, Canada
- [C1] *Combined Group and Exclusive Sparsity for Deep Neural Networks*
[Jaehong Yoon](#) and Sung Ju Hwang
 International Conference on Machine Learning (**ICML**) 2017, Sydney, Australia

RECENT
PREPRINTS

- [P8] *Self-Refining Video Sampling*
 Sangwon Jang, Taekyung Ki, Jaehyeong Jo, Saining Xie, [Jaehong Yoon†](#), and Sung Ju Hwang†
 arXiv:2601.18577, 2026.
- [P7] *Avatar Forcing: Real-Time Interactive Head Avatar Generation for Natural Conversation*
 Taekyung Ki, Sangwon Jang, Jaehyeong Jo, [Jaehong Yoon](#), and Sung Ju Hwang
 arXiv:2601.00664, 2026.
- [P6] *WorldMM: Dynamic Multimodal Memory Agent for Long Video Reasoning*
 Woongyeong Yeo, Kangsan Kim, [Jaehong Yoon†](#), Sung Ju Hwang†
 arXiv:2512.02425, 2025.
- [P5] *Hierarchy-Aware Multimodal Unlearning for Medical AI*
 Fengli Wu, Vaidehi Patil, [Jaehong Yoon](#), Yue Zhang, Mohit Bansal
 arXiv:2512.09867, 2025.
- [P4] *Planning with Sketch-Guided Verification for Physics-Aware Video Generation*
 Yidong Huang, Zun Wang, Han Lin, Dong-Ki Kim, Shayegan Omidshafiei, [Jaehong Yoon](#), Yue Zhang, Mohit Bansal
 arXiv:2511.17450, 2025.
- [P3] *Refusal Falls off a Cliff: How Safety Alignment Fails in Reasoning?*
 Qingyu Yin, Chak Tou Leong, Linyi Yang, Wenxuan Huang, Wenjie Li, Xiting Wang, [Jaehong Yoon](#), YunXing, XingYu, Jinjin Gu
 arXiv:2510.06036, 2025.
- [P2] *Movie Facts and Fibs (MF2): A Benchmark for Long Movie Understanding*
 Emmanouil Zaranis, António Farinhas, Saul Santos, ..., [Jaehong Yoon](#), et al.
 arXiv:2506.06275, 2025.
- [P1] *EPiC: Efficient Video Camera Control Learning with Precise Anchor-Video Guidance*
 Zun Wang, Jaemin Cho, Jialu Li, Han Lin, [Jaehong Yoon](#), Yue Zhang, and Mohit Bansal
 arXiv:2505.21876, 2025.

PATENTS
(US ONLY)

- Method and Device with Federated Learning of Neural Network Weights*
[Jaehong Yoon](#), Geon Park, Wonyong Jeong, Jonghoon Yoon, and Sung Ju Hwang
 US 20240256895 A1, Aug 2024
- Method and Apparatus with Neural Network and Training*
[Jaehong Yoon](#), Saehoon Kim, Eunho Yang, and Sung Ju Hwang
 US 20210256374 A1, Aug 2021
- Electronic Apparatus and Method for Re-learning Trained Model*
[Jaehong Yoon](#), Eunho Yang, Jeongtae Lee, and Sung Ju Hwang
 US 20180357539 A1, Dec 2018

ADVISING
ACTIVITIES

Ph.D.Students

Jiachen Guo (M.S., Queen Mary University of London, 2024) 11.2025 - Current

M.S. Students

Yunhao Liu (B.S., Tsinghua University, 2025) 01.2026 - Current

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[Yidong Huang](#) (Ph.D. Student, UNC-Chapel Hill) 2025 - Current
[Zun Wang](#) (Ph.D. Student, UNC-Chapel Hill) 2024 - Current
[Ziyang Wang](#) (Ph.D. Student, UNC-Chapel Hill) 2024 - Current
[Shoubin Yu](#) (Ph.D. Student, UNC-Chapel Hill) 2023 - Current
[Yi-lin Sung](#) (Ph.D., UNC-Chapel Hill → Research Scientist, Meta) 2023 - 2025
[Daeun Lee](#) (Korea Univ. → Ph.D. Student, UNC-Chapel Hill) 2023 - 2025
[Adyasha Maharana](#) (Ph.D., UNC-Chapel Hill → Research Scientist, Databricks) 2024 - 2024
[Abhay Zala](#) (UNC-Chapel Hill) 2023 - 2024
[Jaewoo Lee](#) (M.S., KAIST → Ph.D. Student, UNC-Chapel Hill) 2022 - 2024
[Sunil Hwang](#) (M.S., KAIST → Lecturer, Korea Military Academy) 2021 - 2023
[Geon Park](#) (M.S., KAIST → Ph.D. Student, KAIST) 2021 - 2022
[Divyam Madaan](#) (M.S., KAIST → Ph.D. Student, NYU) 2021 - 2022

PROFESSIONAL
SERVICES

Other Services

2026 DEI Chair, *Conference on Lifelong Learning Agents* ([CoLLAs](#))

Area Chair

2026 *The Annual Meeting of the Association for Computational Linguistics* ([ACL](#))
2026 *Conference of the European Chapter of the Association for Computational Linguistics* ([EACL](#))
2025 *Neural Information Processing System* ([NeurIPS](#))
2025 *Conference on Lifelong Learning Agents* ([CoLLAs](#)) (Senior Reviewer)
2025 *The Annual Conference of the North American Chapter of the Association for Computational Linguistics* ([NAACL](#))
2024 *Conference on Empirical Methods in Natural Language Processing* ([EMNLP](#))
2024 [NeurIPS 2024](#) *Workshop on Scalable Continual Learning for Lifelong Foundation Models*

Reviewer

Neural Information Processing System ([NeurIPS](#)), *International Conference on Machine Learning* ([ICML](#)), *International Conference on Learning Representations* ([ICLR](#)), *Conference on Lifelong Learning Agents* ([CoLLAs](#)), *International Joint Conferences on Artificial Intelligence* ([IJCAI](#)), *Association for the Advancement of Artificial Intelligence* ([AAAI](#)), *Conference on Empirical Methods in Natural Language Processing* ([EMNLP](#)), *The IEEE/CVF Computer Vision and Pattern Recognition Conference* ([CVPR](#)), etc.

IEEE Transactions on Pattern Analysis and Machine Intelligence ([TPAMI](#)), *IEEE Transactions on Neural Networks and Learning Systems* ([TNNLS](#)), *Journal of Artificial Intelligence Research* ([JAIR](#)), *IEEE/ACM Transactions on Networking* ([ToN](#)), *Neural Networks* ([NN](#)).

AWARDS &
HONORS

NSCC Young Investigator Seed Project (YISP), 2026
AAAI New Faculty Highlights, 2026
Early-Career Spotlight Program, CoLLAs, 2025
Google PaliGemma Academic Program Award, 2024
The Best Ph.D. Dissertation Award from KAIST College of Engineering, 2023
The Best Ph.D. Dissertation Award from KAIST School of Computing, 2023
NeurIPS Top Reviewers Award, 2019
NAVER Ph.D. Fellowship Award, 2017

- INVITED TALKS
- Towards Continually-Evolving AI: Selective and Expandable Multimodal Memory*
Jan. 2026. New Faculty Highlights, AAAI 2026
- Continually-Adaptable Multimodal Agent for the Real World*
Oct. 2025. Department of AI Seminar, Sungkyunkwan University, South Korea
Sep. 2025. GSAI Seminar, UNIST, South Korea
- Toward Continually Growing Embodied AIs*
Aug. 2025 Early Career Talk, CoLLAs 2025
- Trustworthy and Continually Adaptable Multimodal AI Systems*
Dec. 2024. EE, KAIST, South Korea (Virtual)
- On the Communicability of Heterogeneous and Continual Learning Agents*
Aug. 2024. DCDL Tutorial @ MICCAI 2024, USA (Virtual)
Apr. 2023. CMU & MBZUAI, [Prof. Eric Xing's](#) Group, USA (Virtual)
- Lifelong-Adaptive and Self-Evolving AI Systems for Real-world Dynamics and Modalities*
Jul. 2024. CSE/GSAI, Postech, South Korea
Jul. 2024. Electronics and Telecommunications Research Institute (ETRI), South Korea
Jul. 2024. AI Graduate School, KAIST, South Korea
- Large-scale Multimodal Learning: Continuity, Efficiency, and Unification*
Jun. 2024. AI Graduate School, UNIST, South Korea (Virtual)
- Lightweight Video & Multimodal Learning*
Nov. 2023. LG AI Research, South Korea (Virtual)
- Towards Continuously Evolving AI*
Jun. 2023. Edinburgh University, United Kingdom
- Online Coreset Selection for Rehearsal-based Continual Learning*
2022. UT Austin, [Prof. Kristin Grauman's](#) Group, USA (Virtual)
- Representational Continuity for Unsupervised Continual Learning*
2022. Korea Computer Congress (KCC), South Korea
- REFERENCES
- [Prof. Mohit Bansal](#), Professor, University of North Carolina (UNC) Chapel Hill, US
Email: mbansal@cs.unc.edu
- [Prof. Sung Ju Hwang](#), Associate Professor, KAIST, South Korea
Email: sjhwang82@kaist.ac.kr
- [Prof. Bing Liu](#), Professor, University of Illinois at Chicago (UIC), US
Email: liub@uic.edu
- [Prof. Eunho Yang](#), Associate Professor, KAIST, South Korea
Email: eunhoy@kaist.ac.kr
- [Dr. Yue Cao](#), Technical Staff, Beijing Academy of Artificial Intelligence (BAAI), China
Email: caoyue10@gmail.com