JIE LEI

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WORK EXPERIENCE

Meta AI June 2022 - present
Research Scientist *Bellevue, WA*

· Work on vision and language research and products.

EDUCATION

University of North Carolina at Chapel Hill Aug 2017 - May 2022
Ph.D. in Computer Science
Advisors: Tamara L. Berg and Mohit Bansal

University of Electronic Science and Technology of China (UESTC) Sep 2013 - Jun 2017
B.Eng in Computer Science & Technology, Yingcai Honors College
Advisor: Sinno Jialin Pan (NTU, Singapore)

INTERN EXPERIENCE

Facebook AI May 2021 - Dec 2021
Research Scientist Intern with Licheng Yu, Xinlei Chen and Ning Zhang *Menlo Park, CA*

· Vision and language, especially image retrieval.

Microsoft Cloud & AI May 2020 - Aug 2020
Researcher Intern with Linjie Li, Luowei Zhou, Zhe Gan and Jingjing Liu *Bellevue, WA*

· End-to-end vision and language pretraining.

Tencent AI Lab May 2019 - Aug 2019
Research Intern with Liwei Wang, Yelong Shen and Dong Yu *Bellevue, WA*

· Recurrent transformer for coherent video paragraph captioning.

Nanyang Technological University Oct 2016 - Apr 2017
Research Intern with Sinno Jialin Pan *Singapore*

· Transfer learning in deep hash models for fast image retrieval.

University of Manitoba Jul 2016 - Oct 2016
Research Intern with Yang Wang *Winnipeg, Canada*

· Weakly supervised image classification using hierarchical image labels.

PUBLICATIONS

– Citations = 1437; h-index = 14; h10-index = 14; as of Feb 19, 2023

– Check my google scholar profile for the latest list of publications.

[22] Feng Cheng, Xizi Wang, **Jie Lei**, David Crandall, Mohit Bansal, Gedas Bertasius, "VindLU: A Recipe for Effective Video-and-Language Pretraining", CVPR 2023

[21] Yan-Bo Lin, Yi-Lin Sung, **Jie Lei**, Mohit Bansal, Gedas Bertasius, "Vision Transformers are Parameter-Efficient Audio-Visual Learners", CVPR 2023

[20] **Jie Lei**, Tamara L. Berg, Mohit Bansal, "Revealing Single Frame Bias for Video-and-Language Learning", arXiv 2022

[19] Zineng Tang*, Jaemin Cho*, **Jie Lei**, Mohit Bansal, "PERCEIVER-VL: Efficient Vision-and-Language Modeling with Iterative Latent Attention", WACV 2023

[18] Zhenhailong Wang, Manling Li, Ruochen Xu, Luowei Zhou, **Jie Lei**, Xudong Lin, Shuohang Wang, Ziyi Yang, Chenguang Zhu, Derek Hoiem, Shih-Fu Chang, Mohit Bansal, Heng Ji, "Language Models with Image Descriptors are Strong Few-Shot Video-Language Learners", NeurIPS 2022

[17] **Jie Lei**, Xinlei Chen, Ning Zhang, Mengjiao Wang, Mohit Bansal, Tamara L. Berg, Licheng Yu, "LoopITR: Combining Dual and Cross Encoder Architectures for Image-Text Retrieval", arXiv 2022

[16] Yan-Bo Lin, **Jie Lei**, Mohit Bansal, Gedas Bertasius, "ECLIPSE: Efficient Long-range Video Retrieval using Sight and Sound", ECCV 2022 **Oral**

[15] Xinya Du, Zixuan Zhang, ..., **Jie Lei**, ..., Shih-Fu Chang, Martha Palmer, Heng Ji, "Resin-11: Schema-guided event prediction for 11 newsworthy scenarios", NAACL 2022 System Demo

[14] Hao Tan*, **Jie Lei***, Thomas Wolf, Mohit Bansal, "VIMPAC: Video Pre-Training via Masked Token Prediction and Contrastive Learning", CVPRW 2022

[13] **Jie Lei**, Tamara L. Berg, Mohit Bansal, "QVHighlights: Detecting Moments and Highlights in Videos via Natural Language Queries", NeurIPS 2021

[12] Linjie Li*, **Jie Lei***, Zhe Gan, Licheng Yu, Yen-Chun Chen, Rohit Pillai, Yu Cheng, Luowei Zhou, Xin Eric Wang, William Yang Wang, Tamara L. Berg, Mohit Bansal, Jingjing Liu, Lijuan Wang, Zicheng Liu, "VALUE: A Multi-Task Benchmark for Video-and-Language Understanding Evaluation", NeurIPS 2021 Datasets and Benchmarks Track

[11] Linjie Li, **Jie Lei**, Zhe Gan, Jingjing Liu, "Adversarial VQA: A New Benchmark for Evaluating the Robustness of VQA Models", ICCV 2021 **Oral**

[10] **Jie Lei**, Tamara L. Berg, Mohit Bansal, "mTVR: Multilingual Moment Retrieval in Videos", ACL 2021

[9] Jaemin Cho, **Jie Lei**, Hao Tan, Mohit Bansal, "Unifying Vision-and-Language Tasks via Text Generation", ICML 2021

[8] Zineng Tang*, **Jie Lei***, Mohit Bansal, "Improved Pre-Training from Noisy Instructional Videos via Dense Captions and Entropy Minimization", NAACL 2021

[7] **Jie Lei***, Linjie Li*, Luowei Zhou, Zhe Gan, Tamara L. Berg, Mohit Bansal, Jingjing Liu, "Less is More: ClipBERT for Video-and-Language Learning via Sparse Sampling", CVPR 2021 **Best Student Paper Honorable Mention, Oral**

[6] **Jie Lei**, Licheng Yu, Tamara L. Berg, Mohit Bansal, "What is More Likely to Happen Next? Video and Language Future Event Prediction", EMNLP 2020

[5] **Jie Lei**, Licheng Yu, Tamara L. Berg, Mohit Bansal, "TVR: A Large-Scale Dataset for Video-Subtitle Moment Retrieval", ECCV 2020

[4] **Jie Lei**, Liwei Wang, Yelong Shen, Dong Yu, Tamara L. Berg, Mohit Bansal, "MART: Memory-Augmented Recurrent Transformer for Coherent Video Paragraph Captioning", ACL 2020

[3] **Jie Lei**, Licheng Yu, Tamara L. Berg, Mohit Bansal, "TVQA+: Spatio-Temporal Grounding for Video Question Answering", ACL 2020.

[2] **Jie Lei**, Licheng Yu, Mohit Bansal, Tamara L. Berg, "TVQA: Localized, Compositional Video Question Answering", EMNLP 2018 **Oral**

[1] **Jie Lei**, Zhenyu Guo, Yang Wang. "Weakly Supervised Image Classification with Coarse and Fine Labels." CRV 2017

PROJECTS

[1] **Jie Lei**, "AnimeGAN: Create Anime Face using Generative Adversarial Networks", GitHub 2017.
- Implementation of GANs for anime face generation. Data & Code (**1K+ stars**)
- Automatic pipeline for large-scale anime face dataset construction from the web.

AWARDS

Outstanding Reviewer, CVPR 2022, New Orleans 2022

Best Student Paper Honorable Mention, CVPR 2021, Virtual 2021

Adobe Research Fellowship, Adobe, USA 2021

Outstanding Undergraduate Thesis, UESTC, China 2017

Globalink Research Intern Award (200 undergraduates across China), Mitacs, Canada. 2016

ACADEMIC SERVICE

Area Chair / Senior Program Committee: COLING 2022, IJCAI 2023
Organizer: VALUE Challenge @ ICCV 2021, Transformer for Vision Workshop @ CVPR 2022, Tutorial: Knowledge-Driven Vision-Language Pretraining @ AAAI 2023
Journal and Conference Reviewer: TPAMI, IJCV, CVPR 2019-2022, ICCV 2019, ECCV 2020, ACM MM 2020 Interactive Arts, AAAI 2021, ICCV 2021, ACL 2021-2022, NeurIPS 2021-2022, ICLR 2021, NeurIPS HAMLETS 2020, EMNLP 2022