

JIE LEI

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WORK EXPERIENCE

Meta AI <i>Research Scientist</i>	June 2022 - present <i>Seattle, WA</i>
· Work on vision and language research and products.	

EDUCATION

University of North Carolina at Chapel Hill <i>Ph.D. in Computer Science</i> Advisors: Tamara L. Berg and Mohit Bansal	Aug 2017 - May 2022
University of Electronic Science and Technology of China (UESTC) <i>B.Eng in Computer Science & Technology, Yingcai Honors College</i> Advisor: Sinno Jialin Pan (NTU, Singapore)	Sep 2013 - Jun 2017

INTERN EXPERIENCE

University of North Carolina at Chapel Hill <i>Research Assistant with Tamara L. Berg and Mohit Bansal</i>	Aug 2017 - May 2022 <i>Chapel Hill, NC</i>
· Vision and language understanding, esp. video and language.	
Facebook AI <i>Research Scientist Intern with Licheng Yu, Xinlei Chen and Ning Zhang</i>	May 2021 - Dec 2021 <i>Menlo Park, CA</i>
· Vision and language, especially image retrieval.	
Microsoft Cloud & AI <i>Researcher Intern with Linjie Li, Luowei Zhou, Zhe Gan and Jingjing Liu</i>	May 2020 - Aug 2020 <i>Bellevue, WA</i>
· End-to-end vision and language pretraining.	
Tencent AI Lab <i>Research Intern with Liwei Wang, Yelong Shen and Dong Yu</i>	May 2019 - Aug 2019 <i>Bellevue, WA</i>
· Recurrent transformer for coherent video paragraph captioning.	
Nanyang Technological University <i>Research Intern with Sinno Jialin Pan</i>	Oct 2016 - Apr 2017 <i>Singapore</i>
· Transfer learning in deep hash models for fast image retrieval.	
University of Manitoba <i>Research Intern with Yang Wang</i>	Jul 2016 - Oct 2016 <i>Winnipeg, Canada</i>
· Weakly supervised image classification using hierarchical image labels.	

PUBLICATIONS

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

- [16] Yan-Bo Lin, **Jie Lei**, Mohit Bansal, Gedas Bertasius, “ECLIPSE: Efficient Long-range Video Retrieval using Sight and Sound”, arXiv 2022
- [15] **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
- [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: Clip-BERT 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

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

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, ICLR 2021, NeurIPS HAMLETS 2020

Organizer: VALUE Challenge @ ICCV 2021, Transformer for Vision Workshop @ CVPR 2022

Area Chair: COLING 2022