**Liunian Harold Li**
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## Education and Experience

**Ph.D. Student** Sep. 2019 – Now
University of California, Los Angeles; Adviser: Kai-Wei Chang

**B.S. in Computer Science** Aug. 2015 – Jun. 2019
Peking University

**Research Assistant** Jun. 2018 – Sep. 2018
University of California, Los Angeles; Adviser: Kai-Wei Chang

**Research Assistant** Sep. 2016 – Jun. 2018
Peking University; Adviser: Xiaojun Wan

## Research Interest

Multi-modal representation learning
Commonsense representation learning
Efficient algorithms for large-scale machine learning models

## Selected Research Projects

**Unspervised VisualBERT** (Paper)
Pre-trained vision-and-language representation on unaligned raw text and images
Achieves performance close to a model that has access to millions of aligned image-caption data
Scalable to billions of images and text from the Internet, eliminating needs to collect parallel image-caption data

**VisualBERT** (Paper) (Code)
General vision-and-language representation pre-trained on large-scale image-caption data
Outperforms or rivals with state-of-the-art models on four vision-and-language benchmarks
Adopted by various open-source libraries and tasks. E.g., MMF and the Hateful Memes Challenge.

**ELMo-C** (Paper) (Code)
Predict the embedding of a target word instead of using a SoftMax layer
Trainable parameters of the SoftMax layer reduced from hundreds of millions to zero
Achieves 4 times training time speedup with similar performance as ELMo on a range of tasks

## Publications

**Liunian Harold Li**, Haoxuan You*, Zhecan Wang*, Alireza Zareian, Shih-Fu Chang, Kai-Wei Chang. In NAACL 2021.
*Unsupervised Vision-and-Language Pre-training Without Parallel Images and Captions.*

**Liunian Harold Li**, Mark Yatskar, Da Yin, Cho-Jui Hsieh and Kai-Wei Chang. On Arxiv and ACL 2020. Code.
*VisualBERT: A Simple and Performant Baseline for Vision and Language.*

**Liunian Harold Li**, Patrick H. Chen, Cho-Jui Hsieh and Kai-Wei Chang. In TACL 2019. Code.
*Efficient Contextual Representation Learning With Continuous Outputs.*

**Liunian Li** and Xiaojun Wan. In COLING 2018.
*Point Precisely: Towards Ensuring the Precision of Data in Generated Texts Using Delayed Copy Mechanism.*

**Liunian Li**, Xiaojun Wan, Jin-ge Yao and Siming Yan. In IJCNLP 2017.
*Leveraging Diverse Lexical Chains to Construct Essays for Chinese College Entrance Examination.*

## Awards and Honors

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|---|---|
| WeCNLP Travel Grant | Sep. 2019 |
| Outstanding Graduates of Peking University | Jun. 2019 |
| World Quantitative and Science Scholarship | Oct. 2018 |
| Distinguished Student of Peking University | Oct. 2018 |
| Annual Outstanding Research Award of Peking University | Oct. 2017 |
| Soaring Scholarship of Computer Science Department, Peking University | Oct. 2016 |
| Distinguished Community Service Award of Peking University | Oct. 2016 |

## Professional Activities

Reviewer:

- ICLR 2022
- EMNLP 2021
- ICCV 2021
- CVPR 2021
- AKBC 2020
- ICML 2020
- NLPCC 2020