

# YUE YANG

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## EDUCATION

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Ph.D. in Computer and Information Science Aug 2020 - May 2025  
**University of Pennsylvania**  
Advisor: Chris Callison-Burch, Mark Yatskar

M.S. in Robotics Aug 2018 - May 2020  
**University of Pennsylvania**

B.E. in Mechanical Engineering Aug 2014 - May 2018  
**Zhejiang University**

## RESEARCH INTERESTS

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My research lies at the intersection area of Natural Language Processing and Computer Vision. I aim to apply knowledge priors of large language models (LLMs) to guide the visual intelligence, including **interpretable** perception [1][4] and **generalizable** generation systems [2][3].

## SELECTED WORKS

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- [1] **Yue Yang**, Mona Gandhi, Yufei Wang, Yifan Wu, Michael S. Yao, James C. Gee, Chris Callison-Burch, Mark Yatskar. [A Textbook Remedy for Domain Shifts: Knowledge Priors for Medical Image Analysis](#). (**NeurIPS** 2024, **spotlight**)
- [2] Matt Deitke\*, Christopher Clark\*, Sangho Lee, Rohun Tripathi, **Yue Yang**, Jae Sung Park, Mohammadreza Salehi, et al. (51 authors in total) [Molmo and PixMo: Open Weights and Open Data for State-of-the-Art Multimodal Models](#). (**Molmo** Technical Report, 2024)
- [3] **Yue Yang\***, Fan-Yun Sun\*, Luca Weihs\*, Eli Vanderbilt, Alvaro Herrasti, Winson Han, Jiajun Wu, Nick Haber, Ranjay Krishna, Lingjie Liu, Chris Callison-Burch, Mark Yatskar, Aniruddha Kembhavi, Christopher Clark. [Holodeck: Language Guided Generation of 3D Embodied AI Environments](#). (**CVPR** 2024)
- [4] **Yue Yang**, Artemis Panagopoulou, Shenghao Zhou, Daniel Jin, Chris Callison-Burch, Mark Yatskar. [Language in a Bottle: Language Model Guided Concept Bottlenecks for Interpretable Image Classification](#). (**CVPR** 2023)

## PUBLICATIONS

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1. Runsheng Huang, Liam Dugan, **Yue Yang**, Chris Callison-Burch. [MiRAGeNews: Multimodal Realistic AI-Generated News Detection](#). (**EMNLP** 2024)
2. Yiming Huang, Weilin Wan, **Yue Yang**, Chris Callison-Burch, Mark Yatskar, Lingjie Liu. [CoMo: Controllable Motion Generation through Language Guided Pose Code Editing](#). (**ECCV** 2024)
3. Tuhin Chakrabarty, Arkady Saakyan, Olivia Winn, Artemis Panagopoulou, **Yue Yang**, Marianna Apidianaki, Smaranda Muresan. [Large Language Models and Diffusion Models Co-Create Visual Metaphors](#). (Findings of **ACL** 2023)
4. Li Zhang, Hainiu Xu, **Yue Yang**, Shuyan Zhou, Weiqiu You, Manni Arora, Chris Callison-Burch. [Causal Reasoning About Entities and Events in Procedural Texts](#). (Findings of **EACL** 2023)
5. **Yue Yang**, Wenlin Yao, Hongming Zhang, Xiaoyang Wang, Dong Yu, Jianshu Chen. [Z-](#)

LaVI: Zero-Shot Language Solver Fueled by Visual Imagination. (EMNLP 2022)

6. **Yue Yang\***, Artemis Panagopoulou\*, Marianna Apidianaki, Mark Yatskar and Chris Callison-Burch. [Visualizing the Obvious: A Concreteness-based Ensemble Model for Noun Property Prediction](#). (Findings of EMNLP 2022)
7. Shuyan Zhou\*, Li Zhang\*, **Yue Yang**, Qing Lyu, Graham Neubig, Chris Callison-Burch. [Show Me More Details: Discovering Event Hierarchies from WikiHow](#). (ACL 2022)
8. **Yue Yang**, Artemis Panagopoulou, Qing Lyu, Li Zhang, Mark Yatskar, Chris Callison-Burch. [Visual Goal-Step Inference using wikiHow](#). (EMNLP 2021)

## PREPRINTS & WORKSHOP PAPERS

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- [I] Yifan Wu, Yang Liu, **Yue Yang**, Michael S. Yao, Wenli Yang, Xuehui Shi, Lihong Yang, Dongjun Li, Yueming Liu, James C. Gee, Xuan Yang, Wen-bin Wei, Shi Gu. [A Concept-based Interpretable Model for the Diagnosis of Choroid Neoplasias using Multimodal Data](#). (In submission, 2024)
- [II] Josh Magnus Ludan, Qing Lyu, **Yue Yang**, Liam Dugan, Mark Yatskar, Chris Callison-Burch. [Interpretable-by-Design Text Classification with Iteratively Generated Concept Bottleneck](#). (In submission, 2023)
- [III] **Yue Yang**, Joongwon Kim, Artemis Panagopoulou, Mark Yatskar, Chris Callison-Burch. [Induce, Edit, Retrieve: Language Grounded Multimodal Schema for Instructional Video Retrieval](#). (O-DRUM Workshop at CVPR 2022)

## PROFESSIONAL EXPERIENCE

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**PRIOR @ Allen Institute for AI**, Seattle, WA Summer 2023, 2024  
Research Intern (Host: Christopher Clark)  
**Ai2 Outstanding Intern of the Year Award** (2023)

**Tencent AI Lab**, Bellevue, WA Summer 2022  
Research Scientist Intern (Host: Wenlin Yao)

## TEACHING

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### Teaching Assistant

CIS-521 Artificial Intelligence Fall 2019 - Fall 2022  
CIS-530 Computational Linguistics Spring 2021  
**Outstanding Teaching Award**, University of Pennsylvania (2020)

## ACADEMIC SERVICES

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### Paper Review

Computer Vision: CVPR, ECCV, SIGGRAPH Asia.  
Natural Language Processing: ACL, EMNLP, NAACL, EACL, COLM.  
Machine Learning: NeurIPS, TMLR.

## SKILLS

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Programming languages: Python, Matlab, C, Bash, Coq.  
Machine learning libraries: PyTorch, TensorFlow, Keras, Scikit-learn.