

# Yujie Lu

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## EDUCATION

<b>University of California, Santa Barbara</b> Ph.D. in Computer Science, Advisor: William Wang	Santa Barbara, US Sep. 2021 – present
<b>University of California, Santa Barbara</b> M.Sc. in Computer Science, Advisor: William Wang	Santa Barbara, US Sep. 2021 – Mar. 2024
<b>Zhejiang University</b> B.Eng. in Computer Science and Technology	Hangzhou, China Sep. 2015 – Jun. 2019

## INDUSTRY EXPERIENCE

<b>Meta (FAIR Embodied AI)</b> <i>Research Intern, Advisors: Tushar Nagarajan, Yale Song, Lorenzo Torresani</i> Project: Working on post-training of Video Large Language Model.	New York, NY, US Jun. 2024 – present
<b>Amazon AWS AI</b> <i>Research Intern, Advisors: Zhaowei Cai, Hao Yang, Stefano Soatto</i> Project: Working on post-training of Multimodal Large Language Model.	Pasadena, CA, US Jun. 2023 – Sep. 2023
<b>Microsoft Research</b> <i>Research Intern, Advisor: Oriana Riva</i> Project: Working on visual grounding on user interfaces.	Redmond, WA, US Jun. 2022 – Sep. 2022

## SELECTED PUBLICATIONS & PREPRINTS (Google Scholar Profile)

- Yujie Lu**, Dongfu Jiang, Wenhui Chen, William Wang, Yuchen Lin, “WildVision: Evaluating Vision-Language Models in the Wild with Human Preferences” (*NeurIPS 2024*) [paper] [demo]
- Yujie Lu**, Xiujun Li, Tsu-Jui Fu, Miguel Eckstein, William Wang, “From Text to Pixel: Advancing Long-Context Understanding in MLLMs” (*ICML LCFM Workshop 2024*) [paper]
- Yujie Lu**, Pan Lu, Zhiyu Chen, Wanrong Zhu, Xin Eric Wang, William Wang, “Multimodal Procedural Planning via Dual Text-Image Prompting” (*EMNLP 2024*) [paper] [code]
- Max Ku, Tianle Li, Kai Zhang, **Yujie Lu**, Xingyu Fu, Wenwen Zhuang, Wenhui Chen, “Imagenhub: Standardizing the evaluation of conditional image generation models” (*ICLR 2024*) [paper] [code]
- Yujie Lu**, Xianjun Yang, Xiujun Li, Xin Eric Wang, William Wang, “LLMScore: Unveiling the Power of Large Language Models in Text-to-Image Synthesis Evaluation.” *Conference on Neural Information Processing Systems (NeurIPS 2023)* [paper] [code]
- Yujie Lu**, Weixi Feng, Wanrong Zhu, Wenda Xu, Xin Eric Wang, Miguel Eckstein, William Wang, “Neuro-Symbolic Procedural Planning with Commonsense Prompting.” *International Conference on Learning Representations (ICLR 2023) Spotlight* [paper] [code]
- Yujie Lu**, Wanrong Zhu, Xin Wang, Miguel Eckstein, William Wang, “Imagination-Augmented Natural Language Understanding.” *North American Chapter of the Association for Computational Linguistics (NAACL 2022)* [paper] [code]

## ALL PUBLICATIONS & PREPRINTS (Google Scholar Profile)

### Vision and Language Models

- Yujie Lu**, Dongfu Jiang, Wenhui Chen, William Wang, Yuchen Lin, “WildVision: Evaluating Vision-Language Models in the Wild with Human Preferences” (*NeurIPS 2024*) [paper] [demo]

2. Xuehai He, Weixi Feng, Kaizhi Zheng, **Yujie Lu**, Wanrong Zhu, Jiachen Li, Yue Fan, Jianfeng Wang, Linjie Li, Zhengyuan Yang, Kevin Lin, William Yang Wang, Lijuan Wang, Xin Eric Wang, “MMWorld: Towards Multi-discipline Multi-faceted World Model Evaluation in Videos” (*Under review*) [paper]
3. **Yujie Lu**, XiuJun Li, Tsu-Jui Fu, Miguel Eckstein, William Wang, “From Text to Pixel: Advancing Long-Context Understanding in MLLMs” (*ICML LCFM Workshop 2024*) [paper]
4. **Yujie Lu\***, XiuJun Li\*, William Wang, Yejin Choi, “VIM: Probing Multimodal Large Language Models for Visual Embedded Instruction Following” (*NeurIPS Workshop*) [paper] [code] [website]
5. Yijun Qian, **Yujie Lu**, Alexander G. Hauptmann, Oriana Riva, “Visual Grounding for User Interfaces” (*NAACL 2024 Industry Track*)
6. Xinlu Zhang\*, **Yujie Lu\***, Weizhi Wang\*, An Yan, Jun Yan, Lianke Qin, Heng Wang, Xifeng Yan, William Yang Wang, Linda Ruth Petzold, “Gpt-4v (ision) as a generalist evaluator for vision-language tasks” [paper]
7. Edwin Zhang, **Yujie Lu**, William Wang, Amy Zhang, “LAD: Language Augmented Diffusion for Reinforcement Learning” (*ICLR 2024*) [paper]
8. Wanrong Zhu, An Yan, **Yujie Lu**, Wenda Xu, Xin Eric Wang, William Wang, “Visualize Before You Write: Imagination-Guided Open-Ended Text Generation.” *European Chapter of the Association for Computational Linguistics (EACL 2023)* [paper] [code]
9. Weixi Feng, Tsu-Jui Fu, **Yujie Lu**, William Wang, “Towards Underspecified Vision-and-Language Navigation.” *The Conference on Empirical Methods in Natural Language Processing (EMNLP 2022)* [paper] [code]
10. **Yujie Lu**, Wanrong Zhu, Xin Wang, Miguel Eckstein, William Wang, “Imagination-Augmented Natural Language Understanding.” *North American Chapter of the Association for Computational Linguistics (NAACL 2022)* [paper] [code]

#### LLMs and Multimodal Agents

1. **Yujie Lu**, Pan Lu, Zhiyu Chen, Wanrong Zhu, Xin Eric Wang, William Wang, “Multimodal Procedural Planning via Dual Text-Image Prompting” (*EMNLP 2024*) [paper] [code]
2. Zhiyu Chen, **Yujie Lu**, William Wang, “Empowering Psychotherapy with Large Language Model: Cognitive Distortion Detection through Diagnosis of Thought Prompting” *Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)* [paper]
3. Wanrong Zhu, Xinyi Wang, **Yujie Lu**, Tsu-Jui Fu, Xin Eric Wang, Miguel Eckstein, William Wang, “Collaborative Generative AI: Integrating GPT-k for Efficient Editing in Text-to-Image Generation” (*EMNLP 2023*) [paper]
4. Vaishnavi Himakunthala, Andy Ouyang, Daniel Philip Rose, Ryan He, Alex Mei, **Yujie Lu**, Chinmay Sonar, Michael Saxon, William Wang, “Let’s Think Frame by Frame with VIP: A Video Infilling and Prediction Dataset for Evaluating Video Chain-of-Thought” *Conference on Empirical Methods in Natural Language Processing (EMNLP 2023)* [paper]
5. **Yujie Lu\***, Jianren Wang\*, Hang Zhao. “CLOUD: Contrastive Learning of Unsupervised Dynamics” *Proceedings of the Conference on Robot Learning (CoRL 2020)* [paper] [code]

#### Causal Learning

1. **Yujie Lu**, Weixi Feng, Wanrong Zhu, Wenda Xu, Xin Eric Wang, Miguel Eckstein, William Wang, “Neuro-Symbolic Procedural Planning with Commonsense Prompting.” *International Conference on Learning Representations (ICLR 2023) Spotlight* [paper] [code]
2. Matthew S. Ho, Aditya Sharma, Justin Chang, Michael S. Saxon, Sharon Levy, **Yujie Lu**, William Wang, “WikiWhy: Answering and Explaining Cause-and-Effect Questions.” *International Conference on Learning Representations (ICLR 2023)* [paper] [code]

#### Text-to-Image Generation

1. Michael Saxon, Fatima Jahara, Mahsa Khoshnoodi, **Yujie Lu**, Aditya Sharma, William Yang Wang, “Who Evaluates the Evaluations? Objectively Scoring Text-to-Image Prompt Coherence Metrics with T2IScoreScore” (*NeurIPS 2024*) [paper] [project]
2. Xingyu Fu\*, Muyu He\*, **Yujie Lu\***, William Wang, Dan Roth, “Commonsense-T2I Challenge: Can Text-to-Image Generation Models Understand Commonsense?” (*COLM 2024*) [paper]
3. Max Ku, Tianle Li, Kai Zhang, **Yujie Lu**, Xingyu Fu, Wenwen Zhuang, Wenhui Chen, “Imagenhub: Standardizing the evaluation of conditional image generation models” (*ICLR 2024*) [paper] [code]
4. **Yujie Lu**, Xianjun Yang, Xiujuan Li, Xin Eric Wang, William Wang, “LLMScore: Unveiling the Power of Large Language Models in Text-to-Image Synthesis Evaluation.” *Conference on Neural Information Processing Systems (NeurIPS 2023)* [paper] [code]

### Interpretability

1. An Yan, Yu Wang, Yiwu Zhong, Chengyu Dong, Zexue He, **Yujie Lu**, William Wang, Jingbo Shang, Julian McAuley, “Learning Concise and Descriptive Attributes for Visual Recognition.” *International Conference on Computer Vision (ICCV 2023)* [paper]
2. Wenda Xu, Yi-Lin Tuan, **Yujie Lu**, Michael Saxon, Lei Li, William Wang, “Not All Errors are Equal: Learning Text Generation Metrics using Stratified Error Synthesis.” *The Conference on Empirical Methods in Natural Language Processing (EMNLP 2022)* [paper]

### Computational Social Science

1. Hancheng Cao, **Yujie Lu**, Yuting Deng, Daniel McFarland, Michael S. Bernstein, “Does HCI Research Break Through To Industry? A Large-scale Analysis of Patent Citations to HCI Research.” *ACM CHI Conference on Human Factors in Computing Systems (CHI 2023)* [paper]

### Recommendation System

1. **Yujie Lu\***, Ping Nie\*, Ming Zhao, Ruobing Xie, William Wang, “MIC: Model-agnostic Integrated Cross-channel Recommenders.” *The Conference of Information and Knowledge Management (CIKM 2022)* [paper]
2. Shengyu Zhang, Lingxiao Yang, Yao Dong, **Yujie Lu**, Zhou Zhao, Fuli Feng, “Re4: Learning to Re-contrast, Re-attend, Re-construct for Multi-interest Recommendation.” *Proceedings of The Web Conference (WWW 2022)* [paper] [code]
3. **Yujie Lu**, Shengyu Zhang, Yingxuan Huang, Luyao Wang, Xinyao Yu, Zhou Zhao, Fei Wu. “Future-Aware Diverse Trends Framework for Sequential Recommendation” *Proceedings of The Web Conference (WWW 2021)* [paper] [code]

## ACADEMIC SERVICES & SELECTED HONORS

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Best Paper Award, CHI 2023.

Second Place, Amazon Alexa TaskBot Challenge 2023.

Robert Noyce Fellow.

Organizer: SoCalNLP 2022.

Conference Reviewer: ACL, EMNLP, EACL, ECCV, ICCV, CVPR, NeurIPS, AAAI, ICML, AISTATS.

Teaching Assistant: Winter 2023 CS165B Machine Learning.