# WEIXI FENG

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## BIO

I am a fourth-year Ph.D. student in the Computer Science Department of the University of California, Santa Barbara. I am interested at the intersection of vision and language, especially compositional image generation and Large Language Models (LLM). Recently, I have been trying to build LLM-centered visual generation systems in multiple domains (images, videos, 3D).

## EDUCATION

**University of California, Santa Barbara**                    Sep. 2020 - Present
Ph.D. in Computer Science, 3.92/4.0

**University of California, Los Angeles**                    Sep. 2018 - Mar. 2020
M.S. in Electrical and Computer Engineering, 4.0/4.0

**The Hong Kong Polytechnic University**                    Sep. 2014 - Jun. 2018
B.E.(Honors) in Electronic and Information Engineering, 4.0/4.0

## EXPERIENCE

**Adobe Research,** *Research Scientist Intern*                    Jun. 2023 - Sep. 2023
*Mentor: Quan Tran*

**NLP Group, UCSB,** *Graduate Research Assistant*                    Sep. 2021 - present
*Advisor: Prof. William Wang*

**Amazon Ads,** *Data Scientist Intern*                    Jun. 2021 - Sep. 2021
*Mentor: Wei Tang, Marty Eitreim*

## PUBLICATION

*Conference papers*

**LayoutGPT: Compositional Visual Planning and Generation with Large Language Models**
**Weixi Feng**\*, Wanrong Zhu\*, Tsu-jui Fu, Varun Jampani, Arjun Akula, Xuehai He, Sugato Basu, Xin Eric Wang, William Yang Wang (\*equal contribution)
*NeurIPS, 2023*

**EDIS: Entity-Driven Image Search over Multimodal Web Content**
Siqi Liu\*, **Weixi Feng**\*, Wenhu Chen, William Yang Wang (\*equal contribution)
*EMNLP, 2023*

**Training-Free Structured Diffusion Guidance for Compositional Text-to-Image Synthesis**
**Weixi Feng**, Xuehai He, Tsu-Jui Fu, Varun Jampani, Arjun Akula, Pradyumna Narayana, Sugato Basu, Xin Eric Wang, William Yang Wang
*ICLR 2023*

**Neuro-Symbolic Procedural Planning with Commonsense Prompting**
Yujie Lu, **Weixi Feng**, Wanrong Zhu, Wenda Xu, Xin Eric Wang, Miguel Eckstein, William Yang Wang
*ICLR 2023 (Spotlight)*

**ULN: Towards Underspecified Vision and Language Navigation**
**Weixi Feng**, Tsu-jui (Ray) Fu, Yujie Lu, William Yang Wang
*EMNLP 2022*

**CPL: Counterfactual Prompt Learning for Vision and Language Models**

Xuehai He, Diji Yang, **Weixi Feng**, Tsu-Jui Fu, Arjun Akula, Varun Jampani, Pradyumna Narayana, Sugato Basu, William Yang Wang, Xin Eric Wang
*EMNLP 2022*

*Preprints*

**VELMA: Verbalization Embodiment of LLM Agents for Vision and Language Navigation in Street View**

Raphael Schumann, Wanrong Zhu, **Weixi Feng**, Tsu-Jui Fu, Stefan Riezler, William Yang Wang
*ArXiv, 2023*

**Discriminative Diffusion Models as Few-shot Vision and Language Learners**

Xuehai He, **Weixi Feng**, Tsu-Jui Fu, Varun Jampani, Arjun Akula, Pradyumna Narayana, Sugato Basu, William Yang Wang, Xin Eric Wang
*ArXiv, 2023*

**Anticipating the Unseen Discrepancy for Vision and Language Navigation**

Yujie Lu, Huiliang Zhang, Ping Nie, **Weixi Feng**, Wenda Xu, Xin Eric Wang, William Yang Wang
*ArXiv, 2022*

## SERVICE

Reviewer for EACL 2023, ACL 2023, NeurIPS 2023, ICLR 2024, SocalNLP 2022, TL4NLP@NeurIPS 2022.

## TEACHING

| | |
|---|---|
| **Guest Lecture, CS281B Advanced Topics in Computer Vision, UCSB** | Winter 2023 |
| **TA, CS165B Introduction to Machine Learning, UCSB** | Spring 2022, 2020 - 2021 |
| **TA, ECE 247 Neural Network and Deep Learning, UCLA** | Winter 2020 |
| **TA, ECE 102 System and Signals, UCLA** | Fall 2019 |

## AWARDS & ACTIVITIES

| | |
|---|---|
| Robert Noyce Fellow, UC Santa Barbara | 2022 |
| Academic Excellence Fellowship, UC Santa Barbara | 2020 |
| Departmental Outstanding Student, PolyU | 2018 |
| HKSAR Government Scholarship, Hong Kong | 2016-2018 |
| IEEE(HK Section) Prize, PolyU | 2016/17 |
| Wong Tit-Shing Scholarship, PolyU | 2016 |
| CMA & Donors Scholarship, PolyU | 2016 |
| Hitachi (Hong Kong) Ltd. Scholarship, PolyU | 2016 |
| Hong Kong & Kowloon EAMA Scholarship, PolyU | 2016 |
| Dean's List | 2014-2018 |