

# Yen-Ru (Rebecca) Chen

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## EDUCATION

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### University of California, San Diego

*B.S., Computer Science. IDEA Scholar. GPA: 3.96/4.00*

La Jolla, CA

Aug 2023 – Jun 2027

## RESEARCH EXPERIENCE

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### Grounding Powerful MLLMs for Better Image Editing

*University of California, San Diego*

La Jolla, CA

Mar 2026 – May 2026

*Mentors: Prof. Manmohan Chandraker, PhD Student Haodong Li*

- Grounded large multimodal language models (MLLMs) for image editing by introducing pre-edit prompt grounding based on the input image and post-edit scoring specific to image editing. Paper submitted to NeurIPS 2026.

### A Better Inference-Time Reward for Autoregressive Video Diffusion Models

*University of California, San Diego*

La Jolla, CA

Jan 2026 – Mar 2026

*Mentors: Prof. Manmohan Chandraker, PhD Student Haodong Li*

- Explored flexible VLM and VJEPa-based reward for long-horizon task and motion alignment in Autoregressive Video Diffusion.

### What Matters for Long-Horizon Imitation Learning?

*University of California, San Diego*

La Jolla, CA

Oct 2024 – Present

*Mentors: Prof. Hao Su, PhD Student Stone Tao*

- Investigated factors for scaling imitation learning for long-horizon tabletop manipulation.
- Built real-life automatic data collection pipeline for Lerobot SO100.

### Extracting Visual User Knowledge for Procedural Material Generation

*University of California, San Diego*

La Jolla, CA

Sep 2024 – Dec 2025

*Mentors: Prof. Manmohan Chandraker, PhD Student Kunal Gupta*

- Incorporated user tacit knowledge from video demonstrations for material generation.

### Storing Explicit Action Conditions in Images for Diffusion Policy

*California Institute of Technology*

Pasadena, CA

Feb 2025 – Sep 2025

*Mentors: Prof. Aaron Ames, Prof. Georgia Gkioxari, PhD Students Damiano Marsili, Albert H. Li*

- Developed keypoint-based, goal-image conditioning for Diffusion Policy, achieving superior performance with 0% → 50% pick-and-place success rates under diverse cube resets.

### STEP Intern

*Google*

Mountain View, CA

Jun 2024 – Sep 2024

- Delivered latency-free (0%) privacy-preserving AdTech feature.

## PUBLICATIONS

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### 3.1 Conference

- [C1] Stone Tao, Fanbo Xiang, Arth Shukla, Yuzhe Qin, Xander Hinrichsen, Xiaodi Yuan, Chen Bao, Xinsong Lin, Yulin Liu, Tse-Kai Chan, Yuan Gao, Xuanlin Li, Tongzhou Mu, Nan Xiao, Arnav Gurha, Viswesh N, Yong Woo Choi, **Yen-Ru Chen**, Zhiao Huang, Roberto Calandra, Rui Chen, Shan Luo, Hao Su. “Demonstrating GPU Parallelized Robot Simulation and Rendering for Generalizable Embodied AI with ManiSkill3.” (*RSS 2025, WRL@ICLR 2025 Oral*)

### 3.2 Preprint

- [P2] **Yen-Ru Chen**, Haodong Li, Manmohan Chandraker. “GroEdit: Grounding Powerful MLLMs for Better Image Editing.” (*Submitted to NeurIPS 2026*)
- [P1] Kunal Gupta, Gaurav Joshi, **Yen-Ru Chen**, Seemandhar Jain, Ishit Mehta, Manmohan Chandraker. “Reflecting Process Expertise in Procedural Material Generation.” (*Submitted to ECCV 2026*)

## AWARDS

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CRA Outstanding Undergraduate Researcher Award, Honorable Mention, <i>Computing Research Association (CRA)</i>	2026
Lime Connect Fellowship <i>Lime Connect</i>	2025
CSE Internship Symposium Best Technical Skills Award, <i>University of California, San Diego</i>	2024
Provost Honors, <i>University of California, San Diego</i>	2023 – 2024
Jacobs School of Engineering IDEA Scholar, <i>University of California, San Diego</i>	2023
Taiwan Formosa Daughter's Award, <i>The Garden of Hope Foundation</i>	2022

## TEACHING

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<b>Introduction to Computer Vision</b> , <i>University of California, San Diego</i>	Winter 2025, Winter 2026, Spring 2026
Instructional Assistant	

## SERVICE AND OUTREACH

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<b>Instructor</b> , <i>ACM AI @ University of California, San Diego</i>	2024 – 2025
Organized and taught a 4 workshop series on computer vision and deep learning to 60+ students	
<b>Student Panelist</b> , <i>Fullbright Taiwan and Education USA</i>	Feb 2024
Hosted a 2 hour session sharing career planning with Taiwanese high school students	