Chenda Duan

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Education

University of California, Los Angeles (UCLA)

2024.09 - Expected 2028.06

Ph.D in Electrical and Computer Engineering

Los Angeles, CA

- · Associate Teaching Instructor: Data Mining, Probability and Statistics, Complex Networks
- · Focused on: LLM/VLMs, AI for Science, Data Analysis, and general Machine Learning.

University of California, Los Angeles (UCLA)

2022.09 - 2024.06

Master of Science in Computer Science

Los Angeles, CA

- · GPA: 3.9/4.0
- · Teaching Assistant: Computer Organization, Computer Graphics
- Core Courses: Large-scale Machine Learning, Generative Models, Reinforcement Learning, Advanced Computer Architecture, Data Mining, Cloud Computing, Adversarial Robustness, Parallel Computing, Hardware for machine learning.

University of California, Los Angeles (UCLA)

2019.09 - 2022.06

Bachelor of Science in Computer Science

Los Angeles, CA

- · GPA: 4.0/4.0
- · Honor: Summa Cum Laude, Dean's Honors List
- **Core Courses:** CV, NLP, Machine Learning, Probability, Linear Algebra, Algorithms, Software Engineering, Database, Computer Organization&Architecture, Operating Systems, Network, Programming Languages

Technical Skill

Programming Language: Python, C++, Java, SQL, Javascript, R

Frameworks & Tools: Docker, React, Git, Linux, Cloud (GCP), PyTorch, TensorFlow, ROS

Work / Research Experience

UCLA Prof. Roychowdhury's Group

2024.6 - Present

Ph.D Student, Researcher

Los Angeles, CA

- Designed memory-augmented Multimodal/LLM framework for doing RAG and long-context LLM QA tasks. Paper submitted to AAAI 2026
- · Analyzed large-scale temporal neuro data and developed models to decode human memories. Paper submitted to Nature.
- Developed diagnosis pipeline that can process and analyze large-scale neuro-medical data. Build comprehensive dataset and benchmarks. Paper submitted to NeurIPS 2025.

Kuaishou Technology, Kling Team

2023.6 - 2023.9

Research Intern - Y-Tech Kling Team

Beijing, China

· Developed vision-language models for video captioning.

UCLA Prof. Bolei Zhou's Group

2022.03 - 2024.9

Researcher - Prof Bolei Zhou's Lab

Los Angeles, CA

- Proposed a new method and benchmark for improving and assessing embodied scene understanding of visionlanguage models. Provided a large dataset related to spatial, temporal, and safety-critical scene understandings.
 CVPR 2025.
- Built a compositional evaluation platform called MetaUrban for embodied AI research in urban spaces, such as autonomous vehicles. **ICLR 2025 Spotlight**.
- Developed an improved Human-in-the-loop Reinforcement Learning (RL) method. The trained agent can master driving tasks in less than 30 minutes. NeurIPS 2023 Spotlight.
- Built and tested a platform for large-scale traffic scenario modeling and simulation for RL, IL, and autonomous driving. **NeurIPS 2023**.
- · Implemented a more photorealistic simulation environment for training RL autopilot agents using UE4.

UCLA Center for Neurobehavioral Genetics

2020.06 - 2022.6

• Processed and analyzed complex RNA sequence data. Executed comprehensive data analysis to elucidate patterns and insights from the RNA sequences. **Two papers published**.

Selected Publication

- · One paper submitted to AAAI 2026.
- · One paper submitted to Neurips 2025.
- · One paper submitted to Nature.
- · Weizhen Wang, **Chenda Duan**, Zhenghao Peng, Yuxin Liu, Bolei Zhou, "Embodied Scene Understanding for Vision Language Models via MetaVQA". Conference on Computer Vision and Pattern Recognition (CVPR) 2025.
- Wayne Wu, Honglin He, Yiran Wang, **Chenda Duan**, Jack He, Zhizheng Liu, Quanyi Li, Bolei Zhou, "*Metaurban: A simulation platform for embodied ai in urban spaces.*". <u>International Conference on Learning Representations</u> (ICLR) 2025 (Spotlight Paper)
- · Zhenghao Peng, Wenjie Mo, **Chenda Duan**, Quanyi Li, Bolei Zhou, "Learning from Active Human Involvement through Proxy Value Propagation". Neural Information Processing Systems (Neurips) 2023 (Spotlight paper).
- · Quanyi Li, Zhenghao Peng, Lan Feng, Zhizheng Liu, **Chenda Duan**, Wenjie Mo, Bolei Zhou, "ScenarioNet: Open-Source Platform for Large-Scale Traffic Scenario Simulation and Modeling". Neural Information Processing Systems (Neurips) 2023.
- Tommer Schwarz, Toni Boltz, Kangcheng Hou, Merel Bot, Chenda Duan, Loes Olde Loohuis, Marco P. Boks, René S. Kahn, Roel A. Ophoff, Bogdan Pasaniuc, "Powerful eQTL mapping through low coverage RNA sequencing".
 Human Genetics and Genomics Advances 2022.
- · Toni Boltz, Tommer Schwarz, Merel Bot, Kangcheng Hou, Christa Caggiano, Sandra Lapinska, **Chenda Duan**, Marco P Boks, Rene S Kahn, Noah Zaitlen, Bogdan Pasaniuc, Roel Ophoff, "Cell type deconvolution of bulk blood RNA-Seq to reveal biological insights of neuropsychiatric disorders". European Neuropsychopharmacology 2022.