Chunyuan (Bill) Zheng

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Education

University of California, Berkeley **August 2021 – May 2025**
B.S., Electrical Engineering and Computer Science **GPA: 3.985/4, Graduated with High Honors**

- Activities: IEEE; Space Technologies at Cal
- Courses highlights: Deep Reinforcement Learning*, Natural Language Processing*, Machine Learning (A+), Computer Vision*, Robotic Manipulation and Interaction, Introduction to Robotics, Deep Neural Networks, Information Theory and Coding*, Artificial Intelligence, Random Processes in Systems*, Machine Structures, Discrete Math and Probability Theory (A+), Data Structures, Python, Intro to EE (A+)

*: Graduate Level Courses

Publications

Multistep Quasimetric Learning for Scalable Goal-Conditioned Reinforcement Learning *Preprint, Under Review*
BC Zheng, V Myers, B Eysenbach, S Levine, https://arxiv.org/abs/2511.07730
We develop a new framework for learning goal-reaching policies via multistep returns in quasimetric architecture. This enables horizon generalization in simulation and demonstrates emergent task-stitching capabilities in the real world.

Offline Goal-Conditioned Reinforcement Learning with Temporal Distance Representations *NeurIPS 2025*
V Myers, **BC Zheng**, B Eysenbach, S Levine, https://arxiv.org/abs/2509.20478
We propose a new representation learning objective that enables the extraction of goal-reaching policies and converges to the optimal Q function. This enables more effective stitching and goal-reaching policies on offline RL benchmarks.

Temporal Representation Alignment: Successor Features Enable Emergent Compositionality in Robot Instruction Following *NeurIPS 2025*
V Myers*, **BC Zheng***, A Dragan, K Fang, S Levine, https://arxiv.org/abs/2502.05454
Enforcing a temporal alignment of task representations allows us to observe emergent compositional task execution behavior in real-world robotic manipulation tasks and simulations.

Policy Adaptation via Language Optimization: Decomposing Tasks for Few-Shot Imitation *CoRL 2024*
V Myers*, **BC Zheng***, O Mees, S Levine†, K Fang†, https://arxiv.org/abs/2408.16228
We use VLMs to propose language decompositions to optimize pre-trained, language-conditioned robotic policies to execute long-horizon, unseen tasks with only a few demonstrations.

THESAN-HR: Galaxies in the Epoch of Reionization in warm dark matter, fuzzy dark matter and interacting dark matter *MNRAS 2023*
X Shen, …, **BC Zheng**, https://arxiv.org/abs/2304.06742
We discover that alternative models of dark matter induce considerable systemic uncertainty in galaxy formations.

Research

Berkeley Artificial Intelligence Research (BAIR)
Robotics, AI & Learning Lab **January 2024 – Present**

- Advised by Prof. Sergey Levine, Prof. Kuan Fang, and Prof. Benjamin Eysenbach. Current project, *Value Functions in Metric Spaces*: I am exploring how to implement temporal distance learning methods for real-world robotic manipulation. This includes learning an end-to-end policy and/or guiding a pretrained VLA via temporal distance on a variety of diverse tasks.
- Helped organize lab events and presented academic literature in group meetings.

Malik Group **March – October 2023**

- Worked with Prof. Jitendra Malik and Ph.D. Student Ilija Radosavovic in research on reinforcement learning, robot learning, and computer vision. Implemented robot learning algorithms incorporating reinforcement learning algorithms based on a vision-based learning benchmark using a pre-trained ViT backbone.
- Previously implemented meta-learning algorithms to aid better in-context learning algorithms for vision.

Programming Languages and Systems: Python, C, Java, C++, JavaScript, HTML, CSS, URDF, Linux (Ubuntu), ROS
Libraries: Jax, PyTorch, TensorFlow, Keras, Isaac Gym, MuJoCo, D3RLPy, Finetuning VLMs (LLaMa, QWEN), GPT-4 (prompt engineering)

Massachusetts Institute of Technology **November 2022 – April 2023**

Undergraduate Researcher

- Under the supervision of Prof. Mark Vogelsberger at MIT's physics department, working with Ph.D. student Jacob Shen at CalTech. Deployed code for L-1 regression for stellar mass detection.
- Implemented a Variational Autoencoder and a Masked Autoencoder system to capture latent information of particle behavior under THESAN simulation.

Projects

Distance-Weighted Implicit Q-Learning (DIQL) *CS285 Final Project*

- We demonstrated the viability of reducing overestimation bias and pessimism in Implicit Q-Learning (IQL) by incorporating spatial distance between sampled data and replay buffer using RND into current IQL methods.
- Our method maintained performance in discrete-action benchmarks and improved performance for data ablation.

Services

Academic Student Employee **August 2023 – May 2025**

Undergraduate Student Instructor, CS189/289A (Introduction to Machine Learning), SP25

- Served as the primary Ed correspondent and held office hours and homework parties in a class of 750 students.
- Created new teaching content for advanced discussions focused on current machine learning research and designed a new homework for neural networks, which included transfer learning and implementing batch normalization.

Tutor (UCS1), CS180/280A (Introduction to Computer Vision), FA24

- Grade projects, host office hours, assisted with discussion preparation, answered questions from Ed, created new teaching content, and coordinated student logistics in a class of 300 students covering classical computer vision as well as generative models for computer vision (NeRF, Diffusion).

Reader, CS194-196/294-196 (Special Topics in Generative AI and Decentralized Intelligence), FA23

- Graded homework and projects from a class of 120 students, hosted office hours, and answered questions on Ed.

Computer Science Mentors **January 2023 – May 2025**

EECS16B, Course Coordinator

- Held discussion sections and office hours weekly for students needing help taking EECS16B. Led small family meetings with junior mentors weekly to demonstrate teaching techniques. Covered advanced circuits and linear algebra topics such as SVD, Spectral Theorem, linearization, RL/RC/RLC circuits, filters, and control theory.
- Leading the EECS16B team to cover content and logistical issues for social events and review sessions.

Reviewing

ICLR'26; MTI-LLM Workshop, NeurIPS'25.

Awards & Honors

IEEE-HKN **December 2022**

Mu Chapter

- Selected for academic excellence (top quarter of EECS junior class) within Berkeley's EECS Program.

Dean's List **Spring 2022 – Fall 2023**

- Selected for being in the top 10% GPA with at least 12 graded units per semester within the College of Engineering.

Honors to Date **Fall 2021 – Present**

- Selected for being in the top 20% in GPA per semester within the College of Engineering.