DUN-MING (BRANDON) HUANG

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EDUCATION

University of California, Berkeley *August, 2021 - May, 2025*
B.A., Cognitive Science and Computer Science (Double Major) Computer Science GPA: 4.00/4.00
Selection of Courseworks: All-Course GPA: 3.99/4.00
Introduction to Machine Learning (A+), Optimization Models in Engineering (A+, PR $\geq$ 98), Probability and Random Processes (A+), COMPSCI 285: Deep Reinforcement Learning (A)

RESEARCH EXPERIENCE

Undergraduate Researcher, Robotics Learning Lab @ Berkeley AI Research *August 2023 -*
Conducted research in deep unsupervised learning regarding robotics. My current works focus on humanoid robots, from creating benchmarks for standardized assessment of algorithmic performances in humanoid robots to leveraging robot-specific morphologies as inductive biases to augment existing reinforcement learning algorithms.
Supervisor: Dr. Carmelo Sferrazza, Prof. Pieter Abbeel

Guest Affiliation, Max Planck Institute for Empirical Aesthetics *June 2023 -*
Conducted research surrounding several cognitive science topics:
Topic 1: MCMC for Cross-Cultural Psycholinguistics Analysis within and across populations.
Topic 2: Human-in-Loop Annotation and Fine-Tunings of Machine Translations, involving fullstack development and devising of psychology experiments.
Topic 3: Unsupervised Cross-Domain Alignment of High-Dimensional Psychological Spaces via novel statistical learning methods.
Supervisor: Dr. Nori Jacoby, Computational Auditory Perception Research Group

PUBLICATION

1. Carmelo Sferrazza, **Dun-Ming Huang**, Xingyu Lin, Youngwoon Lee, Pieter Abbeel. (2024). HumanoidBench: Simulated Humanoid Benchmark for Whole-Body Locomotion and Manipulation. *Accepted to RSS 2024.*
2. **Dun-Ming Huang**, Pol Van Rijn, Ilia Sucholutsky, Raja Marjieh, Nori Jacoby. (2024). Characterizing Similarities and Divergences in Conversational Tones in Humans and LLMs by Sampling with People. *Accepted to ACL 2024 Main Conference.*
3. Carmelo Sferrazza, **Dun-Ming Huang**, Fangchen Liu, Jongmin Lee, Pieter Abbeel. (2024). Body Transformer: Leveraging Robot Embodiment for Policy Learning. *Accepted to RSS 2024 EARL Workshop.*

COURSE PROJECTS

Diffusion-Based State Sampler for Reinforcement Learning U.C. Berkeley
December 2023
Devised and implemented a novel sample-efficient and information-rich method for agents to explore their reinforcement learning environment via diffusion models as training data synthesizers.

Provably Robust Deep Classifiers Against Adversarial Attack U.C. Berkeley
May 2023

Conducted replication studies of adversarial attack methods against MLPs, and proposed novel initiation patterns for L_2 adversarial attack, reducing dense networks' MNIST-10 accuracy to 0%.

Student Researcher Creative Commons and U.C. Berkeley
September - December 2023
Revive Creative Common's data-driven business analysis projects from its 5 year dormancy, jumpstarting a sustainable documented codebase for coming student researchers to extend upon. Upon public presentation, project was selected for Data Insight Award by U.C. Berkeley, amongst 50 other competing groups.

ACADEMIC AND ADMINISTRATIVE EXPERIENCES

Undergraduate Student Instructor U.C. Berkeley
August 2023 - Present
Course: DATA C100- Principles and Techniques of Data Science

Course Coordinator at Computer Science Mentor U.C. Berkeley
August 2023 - May 2024
A student-run organization that provides guidance and resources through free group tutoring sessions. Co-administrate one of seven branches at this organization with 30+ expected members. Hosted cross-branch workshops, and established the first series of public documentation on pedagogical content production.

Academic Student Employee U.C. Berkeley
January 2022 - December 2023
Course Reader at DATA C100 January - May 2023
Course Reader at EECS 16A August - December 2022

AWARDS AND SCHOLARSHIPS

Data Insights Award at Data Science Discovery, U.C. Berkeley *December, 2022*
Recognized for detailed execution of entire data science life cycle amongst 50+ other groups in U.C. Berkeley's Data Science Discovery program.

Dean's List, Honors to Date, U.C. Berkeley *available record seen until December, 2022*