Harry Bendekgey

www.hbendekgey.me github.com/hbendekgey linkedin.com/in/hbendekgey

Education

Experience

Ph.D. Candidate, University of California, Irvine

Fall 2019-present

GPA: 4.0

Advised by Erik Sudderth. Advanced to Candidacy Spring 2022.

B.A., Pomona College

Graduated Spring 2019 GPA: 3.97

Computer Science and Mathematics (Double Major) Thesis: Clustering Player Strategies from Variable-Length Game Logs in Dominion

Teaching

Instructor of Record

Summer 2023

ICS 6N: Computational Linear Algebra University of California, Irvine For the 10-week summer session: developed all course materials, lectured, and graded

Teaching Assistant

Fall 2020, Winter 2024, Fall 2024

CS 177: Applications of Probability in CS University of California, Irvine

Designed exam content in addition to standard TA duties:

Holding office hours and discussion sections; grading assignments.

Teaching Assistant

Computer Science Department

Pomona College

o Discrete Math and Functional Programming (Head TA) Spring 2019

• Computer Systems

Fall 2018

• Fundamentals of Computer Science (Head TA) Spring 2017, Spring 2018

o Introduction to Computer Science

Spring 2016-Fall 2016

Mentor and Grader

Mathematics Department

Pomona College

 \circ Combinatorial Mathematics Spring 2017, Spring 2018, Spring 2019

o Linear Algebra

Fall 2018

o Statistical Theory Fall 2018

Industry Experience Intern

Summer 2019

Chan Zuckerberg Biohub

San Francisco

Work with the theory group on two projects touching biology, physics, and statistics:

• Investigating the ability of (MC)³ to explore the space of phylogenetic trees, and

o Discovering a new power law for modeling diffusion in crowded dynamic spaces

Engineering Intern

Summer 2017

QuanticMind

Created an API for employees to access databases without requiring access credentials; Led meetings with colleagues to generate common use cases to be addressed by API.

Publications

Unbiased learning of deep generative models with structured discrete representations.

H Bendekgey, G Hope, E Sudderth. NeurIPS 2023

Scaling Study of Diffusion in Dynamic Crowded Spaces.

H Bendekgey, G Huber, D Yllanes, L Yan. APS March Meeting 2022

Scalable & Stable Surrogates for Flexible Classifiers with Fairness Constraints. H Bendekgey, E Sudderth. NeurIPS 2021

Clustering Player Strategies from Variable-Length Game Logs in Dominion. H Bendekgey, AAAI Workshop on Knowledge Extraction from Games (KEG), 2019. **Publications** In Submission

Fast inference in sparse time series.

H Bendekgey, D Sujono, M Motamed, E Sudderth.

Undergraduate data science education: Who has the microphone and what are they

M Dogucu, S Demirci, H Bendekgey, FZ Ricci, CM Medina.

Talks

Why We Use Reverse-Mode Autodiff (And the Time I Didn't)

Feb 2024

UC Irvine DataLab Seminar

Unbiased Learning of Deep Generative Mdels with Discrete Representations Nov 2023 Pomona College Computer Science Colloquium Series.

Department Service

AI Faculty Search Committee, Student Member

2022 - 2024

I was part of a group of 4-6 PhD students who interviewed faculty candidates with a focus on their research, their advising styles, and their interactions with PhD students.

HPI@UCI Workshop Organizer

Coordinated talks and activities for 30 workshop attendees from UC Irvine and the Hasso-Plattner Institute in Germany.

HPI@UCI Reading Group Organizer

2021-2022

Organized a cross-lab reading group of 15 student fellows across machine learning specializations for the 2021-2022 academic year.

UC Irvine Awards

Hasso Plattner Institute Fellowship

2021-2023

Provides 3 years of full Ph.D funding for work on adaptive, safe and human-centered

artificial intelligence.

Enhanced Computer Science Department Excellence Fellowship

2019-2020

Allows first-year Ph.D students to engage sooner and more deeply with research by

dispensing with teaching assistant requirement.

Dean's Award

2019

Extra first-year grant for outstanding research potential.