

Education

Stanford University

September 2021 - Present

PhD in Computer Science, AI

GPA: 4.3/4.0

- *Funding Awards:* I am graciously supported by a DoD NDSEG Fellowship, roughly 2% selection rate.
- *Research Interest:* My research focuses on learning for intelligent decision-making systems.

University of California, Berkeley

August 2017 – May 2021

B.S. Electrical Engineering and Computer Science

GPA: 4.0/4.0

- *Academic Awards:* Highest Honors, top 3% of graduates; Regents and Chancellors Scholar, top <2% incoming
- *Research Awards:* 2021 CRA Undergrad Research Award Honorable mention

Publications

Extreme Q-Learning: MaxEnt RL without Entropy

Published at ICLR 2023

Divyansh Garg*, Donald Joseph Hejna III*, Mattheiu Gesit, Stefano Ermon.

- Develop a new soft-Q learning algorithms that recover optimal values in both online and offline RL settings.

Few-Shot Preference Learning for Human-in-the-Loop RL

Published at CoRL 2022

Donald Joseph Hejna III, Dorsa Sadigh

- Leverage pretraining strategies to improve the query-complexity of preference learning by 20X on robotic tasks.

Improving Long-Horizon Imitation Through Instruction Prediction

Published at AAAI 2023

Donald Joseph Hejna III, Pieter Abbeel, Lerrel Pinto. <https://openreview.net/pdf?id=1Z3h4rCLvo->

- We show that modeling language instructions drastically improves generalization in low data regimes.

Task-Agnostic Morphology Evolution

Published at ICLR 2021

Donald Joseph Hejna III, Pieter Abbeel, Lerrel Pinto. <https://openreview.net/pdf?id=CGQ6ENUMX6>

- We introduce the first unsupervised algorithm for agent design optimization using unsupervised objectives.
- Empirically, we outperform task-supervised algorithms in multi-task settings while being 4x as fast.

Hierarchically Decoupled Imitation for Morphological Transfer

Published at ICML 2020

Donald Joseph Hejna III, Pieter Abbeel, Lerrel Pinto. <https://arxiv.org/abs/2003.01709>

- We overcome different input/output spaces using a hierarchical structure and contribute two key algorithmic improvements motivated by information theory to overcome the domain shift induced in transfer.

Improving Latent Representations via Explicit Disentanglement

Course Project – Unsupervised Learning

Donald Joseph Hejna III*, Ashwin Vangipuram*, Kara Liu*. <http://joeyhejna.com/files/disentanglement.pdf>

- Introduce three methods for disentangling latent representations: cycle loss, divergence penalty, factor prediction.

Professional Experience

Citadel Global Quantitative Strategies, Intern

June 2019 – August 2019

- Developed C++ proxy and API to improve job monitoring, KDB testing scripts for multi-server trading systems.
- Created APIs for trade messages, unified with query systems under a central platform for easy use by traders.
- Explored techniques for reducing RAM usage of decision tree training libraries. Achieved 75% load reduction.

Intel AI Products Group, Intern

May 2018 – August 2018

- Produced demo-products for Intel OpenVino Model Optimizer. Computer vision project [featured on intel's blog](#).
- Developed workflows for AWS model training, explored gradient based explanations for CV and NLP models.

Activities and Projects

Research Lightning

<https://github.com/jhejna/research-lightning>

- A lightweight open-source framework used for quickly implementing deep learning algorithms in pytorch.

EECS Department, Teaching Assistant

August 2019 - Present

- EECS 127: Optimization Models. Fall 2020. Teaching sections. Course includes lin alg., duality, convex models
- CS 189: Machine Learning. Fall Spring 2020. Weekly sections, office hours, creating questions and content.
- CS 70: Discrete Math and Probability Theory. Fall 2019. Taught two weekly discussion sections, office hours.