I. DAVID REIN

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WORK & RESEARCH EXPERIENCE

NYU: Researcher   September 2022 - Present
· Scalable AI alignment research, supervised by Sam Bowman.

Cohere: Member of Technical Staff   September 2020 - Present
· Trained large production LLMs on TPU v4 pods with Jax, designed and implemented core infrastructure.
· Early employee (#10). Representation learning research, experiments on novel finetuning methods.

Duke University: ML Research with Dr. Vincent Conitzer   January - August 2020
· *Classification with Strategically Withheld Data:* AAAI 2021
· Evaluated the performance of a novel classification algorithm that is provably robust to strategically withheld data.

Duke University: Deep Learning: Theory and Use   January - May 2019
· Helped design the graduate-level *Foundations of Deep Learning* (STA 790) course.
· Created lecture slides, and designed illustrative experiments regarding regularization, NAS, quantization, and training strategies. The course was taught by Dr. David Banks during the Fall 2019 semester.

EDUCATION

Duke University   December 2021
· B.S. Computer Science, B.A. Philosophy **-** GPA: 3.81/4.0
· *Machine Learning (graduate level), Bayesian and Modern Statistics (graduate level), Applied Ethics, Metaphysics, Ethics and AI, Computational Microeconomics, Algorithms, Operating Systems, Computer Architecture, Science and Social Justice*

LEADERSHIP

Duke Undergraduate Machine Learning: Co-President   August 2018 - 2020
· Organized 2019 Duke Datathon with 350+ participants; raised over $20k in sponsorship for the event.
· Hosted ~20 speakers from leading industry and research labs for seminars and workshops; average 20-40 attendees.
· Helped organize 2019 Duke Machine Learning Day, a conference for undergraduates with 125+ attendees.

Duke Effective Altruism: Co-President   August 2019 - 2021
· Led and helped design the Arete Fellowship, a 12-week discussion-based program to introduce 20+ undergrads to EA.

ACTIVITIES AND SKILLS

AGI Safety Fundamentals   January - May 2022
· Facilitated and led discussions for a group in the Technical Alignment track

Reinforcement Learning Implementations   May - June 2019
· Implemented REINFORCE (VPG), A2C with Generalized Advantage Estimation, and Proximal Policy Optimization.

ASA Duke DataFest: 1st Place - Best Insight Award   April 2019
· Competed in a group against 425+ undergraduate (2/3) and graduate (1/3) students from 8 universities.
· Predicted fatigue from biometric data of the Canada women's rugby 7s team with a Cox proportional hazards model.

Kenan Institute for Ethics Policy Prize in the Ethics of Emerging Tech: 2nd Place   April 2019
· Co-authored research paper on mechanics, ethics, and international policy of orbital debris and anti-satellite weaponry
· Presented paper at the 2019 Duke Conference on the Ethics of Emerging Technology.

Languages and Tools: Python, NumPy, TensorFlow, Jax, PyTorch, Scikit-Learn, Pandas