McKane Andrus

3010 Shattuck Ave, Berkeley, CA 94705
310-579-5573 | mckaneandrus@berkeley.edu

Education

M.Sc. Computer Science, 2019   GPA 3.85
University of California Berkeley
Thesis (in-progress): *"Inverse Dynamics Learning for Human Robot Interaction"*
Advisor: Anca Dragan

B.A. Interdisciplinary Studies, Technology and Inequality, 2018   Major GPA 3.97
B.A. Computer Science, 2017   Major GPA 3.87
University of California Berkeley
Interdisciplinary Thesis: *"Serving Two Masters: An Expeditionary Attempt at Critical Technical Practice in Human Compatible Artificial Intelligence"*
Advisor: Shreeharsh Kelkar
High Honors, Phi Beta Kappa

Research Interests

AI and Justice, AI Policy, Human Compatible AI, Human Robot Interaction, Critical Technical Practices, Deep Reinforcement Learning, Value Sensitive Design, Science and Technology Studies, AI Pedagogy

Current Research Position

Interact Lab, Berkeley, California
Graduate Researcher, May 2018 – Present
Developing algorithms for generating robust human models given goals and demonstrations.

Current Grants and Affiliations

Center for Longterm Cybersecurity, Berkeley, California
Research Grantee, January 2019 – Present
Conducting cross-disciplinary historical analysis of professionalization and pedagogy formation around issues such as security, safety, and public interest to inspire cybersecurity and AI/ML guidelines.

Algorithmic Fairness and Opacity Working Group, Berkeley, California
Affiliated Graduate Researcher, August 2018 – Present
Working on proposals for *just* applications of AI/ML in the context of institutional decision-making.

Center For Human-Compatible AI, Berkeley, California
Affiliated Graduate Researcher, May 2018 – Present
Building out interdisciplinary perspectives on Value Alignment and Legible Normativity.

Past Research Positions

Center For Human-Compatible AI, Berkeley, California
Undergraduate Researcher, January 2017 – December 2017
 - Worked on mechanism design guarantees and efficient algorithms for Negotiable Reinforcement Learning
 - Explored applications of Rawlsian justice to AI/ML.

Berkeley School of Information, Richmond, California
Data Analyst and *Camp Counselor*, June 2016 – August 2016
Served as a part-time camp counselor for Connected Camps and analyzed the chat and server logs for an ongoing research project.

Political Economy of the UC Research Group, Berkeley, California
Web Design Research Assistant, January 2016 – May 2016
Designed a web tool that clarifies students' financial aid distributions.

Peer Reviewed Publications

Andrus, M., Gilbert, T.K. (2019) Towards a Just Theory of Measurement: A Principled Social Measurement Assurance Program. In Proceedings of the 2019 conference on AI Ethics and Society. Selected for oral presentation (15% of all submitted papers).

Hadfield-Menell, D., **Andrus, M.**, Hadfield, G. (2019) Legible Normativity for AI Alignment: The Value of Silly Rules. In Proceedings of the 2019 conference on AI Ethics and Society. Selected for oral presentation (15% of all submitted papers).

Peer Reviewed Extended Abstracts

Andrus, M. (2019) On Serving Two Masters: Directing Critical Technical Practice towards Human-Compatibility in AI. In Proceedings of the 2019 conference on AI Ethics and Society.

Outreach

GEESE (Graduates for Engaged and Extended Scholarship in Engineering), January 2018 - Present
Founding member, contributing to publications and events organization that are centered around developing interdisciplinary and socially motivated engineering pedagogies.

BAIR AI4ALL Camp, August 2017, August 2018
A summer camp for high-schoolers of underrepresented demographics in AI. Worked as a mentor for the 2017 camp, and helped organize and develop the curriculum for the 2018 camp.

Connected Camps, July-August 2016
Taught elementary- to middle-school aged children about programming and AI through Minecraft mods.

Socially Engaged Engineers, September 2015 - May 2017
Helped organize multiple events for the 2016 and 2017 Engineering Ethics Weeks and worked on the curriculum for our DeCal, a student led course for credit.

Event Organization (selected)

Bias in Datasets + Fairness in Machine Learning
Session at Code For America Summit, 5/29/2019
A breakout session that will dig into what the necessary bias of datasets means for ML and, in light of this bias, how we can position ML in institutional decision-making to ensure fairness.

Tech Skepticism and Worker Activism: Drawing Lessons for Research and Education
Panel at UC Berkeley, 12/12/2019
A multi-panel event looking at recent crises in the tech industry (e.g. Google Walkout, Project Maven) to reflect on what graduate students can do now to prepare to be ethical researchers and educators.

Can Technology Solve Big Problems?
Panel at UC Berkeley, 4/18/2016
An interdisciplinary panel for Berkeley's Engineering Ethics Week that looked critically at when technology and engineering are suited to solve problems and when other disciplines need to be engaged.

Work Experience

Digital Democracy, Oakland, California
Software Engineering Intern, June 2016 – August 2016
Helped develop a new front end for the Mapeo Desktop application.

Berkeley Student Cooperative, Berkeley, California
House Manager, Maintenance Manager, Network Manager, August 2014 – December 2017
Worked in numerous manager positions at Davis House Cooperative, mediating conflicts, ensuring the safety and habitability of the building, and maintaining the network infrastructure.

Acha Carro, Topanga, California
Web Design Intern, June 2014 – August 2014
Developed advertisements and began work on a mobile version of the website.

Skills and Attributes

Fluent in Python (Tensorflow, Keras) and Java

Varying degrees of familiarity with too many disciplines.

Love for travel – recently made it to my 60th country!