Ryan Blake Jackson

PhD Candidate
Colorado School of Mines
MIRROR Lab

✉ rbjackso@mines.edu
rbjackson.github.io
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Advised by Dr. Tom Williams, my current research interests include human-robot interaction (particularly verbal noncompliance and clarification interactions), robot ethics, natural language generation (especially pragmatics), people's natural application of socially constructed identity attributes (like gender, race, and class) to artificial agents, and machine learning to detect and disambiguate euphemistic speech.

Education

2018–Present **Ph.D. Computer Science**, Colorado School of Mines.
Adviser: Dr. Tom Williams
GPA: 4.0

2016–2018 **M.S. Computer Science**, Colorado School of Mines.
Adviser: Dr. Tracy Camp
GPA: 4.0

2012–2016 **B.A. Computer Science**, Colorado College.
Discrete Math Minor
GPA: 3.96

Publications

2020 **Exploring the Role of Gender in Perceptions of Robotic Noncompliance**.
Ryan Blake Jackson, Tom Williams, and Nicole M. Smith
Proceedings of the 15th ACM/IEEE International Conference on Human-Robot Interaction (HRI)

2019 **On Perceived Social and Moral Agency in Natural Language Capable Robots**.
Ryan Blake Jackson and Tom Williams
HRI Workshop on The Dark Side of Human-Robot Interaction: Ethical Considerations and Community Guidelines for the Field of HRI

2019 **Towards A Role Ethics Approach to Command Rejection**.
Ruchen Wen, **Ryan Blake Jackson**, Tom Williams, and Qin Zhu
HRI Workshop on The Dark Side of Human-Robot Interaction: Ethical Considerations and Community Guidelines for the Field of HRI

2019 **Language-Capable Robots may Inadvertently Weaken Human Moral Norms**.
Ryan Blake Jackson and Tom Williams
Proceedings of the Companion of the 14th ACM/IEEE International Conference on Human-Robot Interaction (HRI)

2019 **Tact in Noncompliance: The Need for Pragmatically Apt Responses to Unethical Commands**.
Ryan Blake Jackson, Ruchen Wen, and Tom Williams
Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)

2018 **Robot: Asker of Questions and Changer of Norms?**.
Ryan Blake Jackson and Tom Williams
Proceedings of the International Conference on Robot Ethics and Standards (ICRES)

2018 **A Bayesian Analysis of Moral Norm Malleability during Clarification Dialogues**.
Tom Williams, **Ryan Blake Jackson**, and Jane Lockshin
Proceedings of the 40th annual meeting of the Cognitive Science Society (COGSCI)

2018 **Amazon Echo Security: Machine Learning to Classify Encrypted Traffic**.
Ryan Blake Jackson and Tracy Camp
27th International Conference on Computer Communication and Networks (ICCCN)

2017 **Anomaly Detection in Earth Dam and Levee Passive Seismic Data Using Multivariate Gaussian**.
Wendy Fisher, **Ryan Blake Jackson**, Tracy Camp, and Valeria V. Krzhizhanovskaya
16th IEEE International Conference on Machine Learning and Applications (ICMLA)

Abstracts and Presentations

2019 **Generating Appropriate Responses to Inappropriate Robot Commands**.
Ryan Blake Jackson
Proceedings of the Student Program of the 2nd AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES)

2019 **Toward Morally Sensitive Robotic Communication**.
Ryan Blake Jackson
Proceedings of the Human-Robot Interaction (HRI) Pioneers Workshop

2018 **Challenges in Responding to Malicious Robot-Directed Commands**.
Ryan Blake Jackson and Tom Williams
Extended Abstracts of the Robotics: Science and Systems Workshop on Adversarial Robotics

2018 **Blame-Laden Moral Rebukes and the Morally Competent Robot: A Confucian Ethical Perspective**.
Qin Zhu, Tom Williams, and **Ryan Blake Jackson**
Proceedings of the Workshop on Brain-Based and Artificial Intelligence

Research Positions

2016–Present **Research Assistant**, Colorado School of Mines.
Contributed to research on various departmental grant projects and publications. Mentored several undergraduates working on various projects.

2016–2018 **Master's Thesis Research**, Colorado School of Mines.
Investigated machine learning to extract ostensibly private information from data moving between an Echo device and Amazon's servers, despite encryption. Explored determining what type of user request is being answered by the Echo and who, of a finite set of people, is speaking to the Echo.

Summer 2017 **Machine Learning Intern**, Ricoh Production Print Solutions LLC.
Created a machine learning system to predict production print performance from document traits. System used by sales team to respond to customer inquiries.

2015–2016 **Senior Capstone Research Project**, Colorado College.
Performed detailed statistical analysis of multithreading context switch data from various operating systems. Presented and defended analysis to suggest kernel optimizations.

Summer 2015 **Undergraduate Researcher**, University of Illinois at Urbana-Champaign, Parallel Computing Institute.
Researched machine learning for astrophysics to determine relative velocities of galaxies and properties of dark energy. Presented technical poster summarizing research.

Teaching

2018–2019 TA for Computer Vision

2018 Instructor for Computer Science 101

2017 Instructor for Introduction to Linux

2017–2018 Made and graded midterm and final exams for Computer Simulation

Honors and Awards

2020 **EAAI-20 New and Future AI Educator Award**
Tenth Symposium on Educational Advances in Artificial Intelligence

2020 **Best Poster**
Computing-Mines Affiliates Partnership Program (C-MAPP)

2019 **Accepted participant**
HRI Pioneers Graduate Student Consortium

2019 **Accepted participant**
AIES Graduate Student Consortium

2018 **Best Poster Runner Up**
Computing-Mines Affiliates Partnership Program (C-MAPP)

2016 **Florian Cajori Award** for outstanding mathematical prowess
Colorado College

2016 **Graduated Magna Cum Laude**
Colorado College

2016 **Departmental Distinction in Computer Science**
Colorado College

2012 **Volunteerism/Community Service Scholarship**
Colorado Council on High School/College Relations

Selected Professional Service

2020 Panel Chair for the Human-Robot Interaction (HRI) Pioneers Workshop

2019 Reviewer of multiple papers for the 15th ACM/IEEE International Conference on Human-Robot Interaction (HRI-2020)

2018–2020 Met with and evaluated faculty candidates

2016 Instructed educational computer science Summer camps for local elementary/middle school students

2016 Instructed professional development workshops for K-12 computer science educators