

Ryan Murdock

American Fork, UT | (801) 709-4997 | u1067216@utah.edu

Education & Research

Ph.D. Student in Cognition and Neural Science

August 2020 - Present

University of Utah

Salt Lake City, Utah

- Advised by Doctors Trafton Drew and Brennan Payne
- Awarded Clayton Research Fellowship for Summer 2021

Research Assistant in Dr. Taylor D. Sparks's lab

June 2019 - June 2020

University of Utah

Salt Lake City, Utah

- Conducted research project funded under UROP
- Built machine learning systems funded through traineeship

B.S. in Psychology with Cognitive Science minor

August 2016 - May 2020

University of Utah

Salt Lake City, Utah

- Awarded University of Utah President's Scholarship
- Attained position as University of Utah Solutions Scholar, becoming part of an interdisciplinary cohort aimed at addressing pressing social issues

Publications

Wang, A., **Murdock, R.**, Kauwe, S. K., Oliynyk, A. O., Gurlo, A., Brgoch, J., Persson, K. A., & Sparks, T.D.

Machine Learning for Materials Scientists: An Introductory Guide toward Best Practices

Wang, A., Kauwe, S. K., **Murdock, R.**, & Sparks, T. D. (Submitted). *Compositionally-Restricted*

Attention-Based Network for Materials Property Prediction

Murdock, R., Kauwe, S. K., & Sparks, T. D. *Is domain knowledge necessary for machine learning materials properties?*

Kauwe, S. K., Graser, J., **Murdock, R.**, & Sparks, T. D. *Can machine learning find extraordinary materials?*

Presentations

Wang, A., Kauwe, S. K., **Murdock, R.**, & Sparks, T. D. (2020, February). *New algorithms, descriptors, and machine learning techniques tailored to the challenges of materials informatics* Talk given in place of Dr. Sparks at the Utah Center for Data Science Seminar, Salt Lake City, UT.

Murdock, R., Kauwe, S. K., & Sparks, T. D. (2019, November). *Is domain knowledge necessary for machine learning material properties?* Poster presented at the International Mechanical Engineering Congress & Exposition, Salt Lake City, UT.

Teaching Experience

Teaching Assistant for Dr. Katherine J.W. Baucom

University of Utah

August 2019 - December 2019

Salt Lake City, Utah

Tutor for the University of Utah Athletic Department

University of Utah

August 2018 - April, 2020

Salt Lake City, Utah

Volunteering

Undergraduate Student Advisory Committee Member

University of Utah

October 2019

Salt Lake City, Utah

Volunteer Supervisor

Kids on the Move

August 2017 - Present

Orem, Utah

Respite Volunteer

Kids on the Move

October 2014 - August 2017

Orem, Utah