

Scott M. Jordan

PH.D. STUDENT · REINFORCEMENT LEARNING AND ROBOTICS

Amherst, MA, 01002, USA

✉ sjordan@cs.umass.edu 🏠 <https://people.cs.umass.edu/~sjordan/>

Education

University of Massachusetts Amherst

MS/PHD IN COMPUTER SCIENCE

Amherst, MA

2015 - Present

Oregon State University

B.S. IN COMPUTER SCIENCE

Corvallis, OR

2009 - 2015

Research Experience

University of Massachusetts Amherst, (Prof. Roderic Grupen)

GRADUATE RESEARCH ASSISTANT

Amherst, MA

Sep. 2016 - Now

- Training a robot to do a peg-in-hole insertion task using both deep reinforcement learning and classic techniques
- Applying unsupervised representation learning to a robot's senses for learning long term action sequences
- Developed closed-loop controllers for manipulation and force feedback on a bi-manual mobile robot

University of Massachusetts Amherst, (Prof. Hava Siegelmann)

GRADUATE RESEARCH ASSISTANT

Amherst, MA

Sep. 2015 - Aug. 2016

- Trained and analyzed robustness sensory representation of multimodal deep reinforcement learning agent
- Showed sensor loss causes networks trained solely with the Bellman update to no longer select meaningful actions
- Developed 3D simulator for training multimodal RL agents with vision and lidar

Oregon State University (Prof. Thomas Dietterich)

UNDERGRADUATE RESEARCH ASSISTANT

Corvallis, OR

Sep. 2013 - Jun. 2015

- Investigated salmon migration to determine influence of flow rate and temperature
- Identified snow pack as prime indicator for upstream migration
- Created Prediction model for Chinook Salmon
- Applied functional data analysis to model salmon migration curves
- Trained supervised learning methods to predict days salmon migration will take place

Work Experience

Cambia Health Solutions (Analytic Reporting Department)

SOFTWARE DEVELOPMENT INTERN

Portland, OR

Jul. 2012 - Sep. 2013

- Developed a Java Web application to manage data include in reports
- Performed Extract, Transform and Load (ETL) operations for large databases

Electro Scientific Industries

SOFTWARE DEVELOPMENT INTERN

Portland, OR

Jun. 2012 - Dec. 2012

- Improved speed and usability of user interface on micro machining product
- Extracted error messages from logs using machine learning and text mining techniques

Extracurricular Activity

IEEE International Conference on Robotics and Automation (ICRA)

REVIEWER

2017

- Paper Reviewer

FIRST Tech Challenge

U.S.A.

VOLUNTEER JUDGE

2010 - PRESENT

- Interview and evaluate middle and high schools robotics teams at tournaments and give awards
- Judge at tournaments in Oregon from 2010 to 2015
- Judge at World Championships in St. Louis in 2015
- Judge at Massachusetts tournaments in 2017

Skills

Programming Python, C/C++, Java, ROS, Theano, Tensorflow, OpenCV, R, SQL

Honors & Awards

- | | | |
|------|---------------------------------------------------------------------------------------------------------------|----------------------|
| 2009 | TechStart Student Technologist of the Year , 4 Year scholarship given to an Oregon high school student | <i>Oregon, U.S.A</i> |
| 2009 | Eagle Scout , Highest rank in the Boy Scouts of America | <i>Oregon, U.S.A</i> |

Publications

- [1] Scott M. Jordan, Dirk Ruiken, Tiffany Q. Liu, Takeshi Takahashi, Michael W. Lanighan, and Roderic A. Grupen. Summary of Belief-Space Planning at the Laboratory for Perceptual Robotics. *Association for the Advancement of Artificial Intelligence*, 2017.
- [2] Li Yang Ku, Scott Jordan, Julia Badger, Erik Learned-Miller, and Rod Grupen. Learning to use a ratchet in three demonstrations. *Robotics and Automation (ICRA), 2018 IEEE International Conference on*, 2017. Under Review.