# **ASHLEY EDWARDS**

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### **CAREER OBJECTIVE**

I am interested in research involving reinforcement learning, robotics, and machine learning.

## **EDUCATION**

## Georgia Institute of Technology, Atlanta, GA

August 2011 - May 2019

- PhD in Computer Science: GPA 3.66
- Awarded 2012-2015 NSF Graduate Research Fellowship
- Awarded 2015-2016 Xerox Technical Minority Scholarship

### University of Georgia, Athens, GA

August 2007 - May 2011

- Bachelor of Science in Computer Science: GPA 3.58
- Awarded HOPE Scholarship from 2007-2011

### TECHNICAL SKILLS

Languages • Proficient in: Java, Python

• Experience with: C/C++, Matlab

**Software & Technology** • Platforms: Windows, Linux, OS X, Amazon EC2

Libraries: OpenCV, Tensorflow

### **EXPERIENCE**

Research Scientist Spring 2019 - Present

Uber AI Labs, San Francisco, CA

Research in reinforcement learning

### **Software Engineering Intern**

Summer 2017

Google Brain, Mountain View, CA

• Research within the Google Brain team

### **Software Engineering Intern**

Summer 2016

Google Photos, Mountain View, CA

Research and Development within the Google Photos team

#### **Graduate Research Assistant**

August 2011 - Present

Georgia Institute of Technology, Atlanta, GA

• Research in Reinforcement Learning in Dr. Charles Isbell's "Lab for Interactive Machine Learning"

## **Graduate Teaching Assistant**

Fall 2015

Georgia Institute of Technology, Atlanta, GA

• TA for Dr. Charles Isbell and Dr. Michael Littman's Graduate Level Reinforcement Learning Course at Udacity

NSF GROW Fellow Summer 2015

Waseda University, Tokyo, Japan

- Summer research intern in Dr. Atsuo Takanishi's research lab
- Developed Reinforcement Learning algorithm to train agents to learn behavior from videos without tracking features

## **Graduate Teaching Assistant**

Fall 2012

Georgia Institute of Technology, Atlanta, GA

TA for Dr. Thad Starner's Graduate Level AI Class

## **Temp Operations Specialist**

June 2011 - August 2011

CGI, Atlanta, GA

Added features and verified code fixes within software

## **NSF Funded Undergraduate Research**

June 2010 - July 2010

Rutgers University, Piscataway, NJ

Developed Higher-Order Q-Learning in Dr. William Pottenger's research lab

Independent Study Spring 2010

University of Georgia, Athens, GA

• Studied multi-agent RL in Dr. Prashant Doshi's lab

### **NSF Funded Undergraduate Research**

June 2009 - August 2009

University of Massachusetts, Amherst, MA

 Studied and implemented common reinforcement learning problems in Dr. Andy Barto's "Autonomous Learning Lab"

### **PUBLICATIONS**

Edwards, A., Sahni, H., Schroecker, Y., Isbell, C. "Imitating Latent Policies from Observation." In the *Proceedings of the 36th International Conference on Machine Learning (ICML)*. California, USA, May 2019.

Edwards, A., Downs, L., Davidson, James. "Forward Backward Reinforcement Learning." In the *Machine Learning in Planning and Control of Robot Motion workshop*. Brisbane, Australia, May 2018 (ICRA workshop)

Edwards, A., Isbell, C. "Transferring Agent Behaviors from Videos via Motion GANs." In *Deep Reinforcement Learning Symposium*. California, USA, December 2017 (NIPS Symposium)

Edwards, A., Hood, S., Isbell, C. "Cross-Domain Perceptual Rewards for Reinforcement Learning." In *The 3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Michigan, USA, June 2017

Edwards, A., Isbell, C., Takanishi, A. "Perceptual Reward Functions." In *Deep Reinforcement Learning: Frontiers and Challenges*. New York, USA, July 2016. (IJCAI Workshop)

Edwards, A., Littman, M., Isbell, C. "Expressing Tasks Robustly via Multiple Discount Factors." In *The 2nd Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Edmonton, Canada. June 2015.

Edwards, A. and Pottenger, W. M. "Higher Order Q-Learning." In *IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning*. Paris, France. April 2011.

## INVITED TALKS AND TEACHING

| "Learning Values and Policies from State Observations." | June 2019 |
|---|-----------|
| Rework Deep Reinforcement Learning Summit               |           |

| "Q-Learning, Sarsa, and Monte Carlo Tree Search."                             | April 2016 |
|---|------------|
| Guest Lecture for Dr. Charles Isbell's Undergraduate Machine Learning Course. |            |

| "Monte Carlo, Policy Iteration, and TD Methods".                              | April 2016 |
|---|------------|
| Guest lecture for Dr. Charles Isbell's Undergraduate Machine Learning Course. |            |

"Q-Learning and Sarsa." April 2015 Guest Lecture for Dr. Charles Isbell's Undergraduate Machine Learning Course.

"Higher Order Q-Learning." February 2011
Presentation for Dr. Michael Littman's lab at Rutgers University.

## **SERVICE**

| Reviewer for ICML Workshop on Multi-Task and Lifelong RL              | Summer 2019 |
|---|-------------|
| ICML Reviewer   | Winter 2019 |
| Co-organized 1st Workshop on Goal Specifications for RL at ICML       | Summer 2018 |
| Reviewer for Exploration in RL workshop at ICML                       | Summer 2018 |
| Reviewer for Black in AI Workshop                                     | Fall 2017   |
| Volunteer for SOCML   | Fall 2017   |
| Reviewer for Future of Interactive Learning Machines Workshop at NIPS | Fall 2016   |
| Reviewer for NeurIPS  | Summer 2016 |
| Organized Robotics-RL reading group at Google Brain                   | Summer 2016 |
| Volunteer for RLDM  | Summer 2015 |