Lucas Thompson

Machine Learning Engineer

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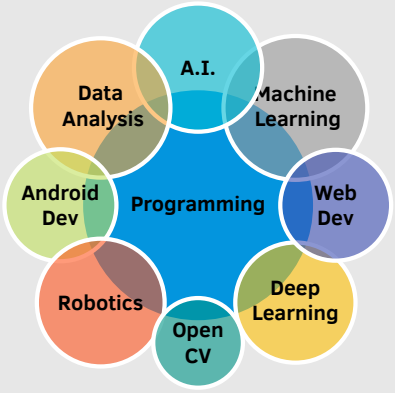
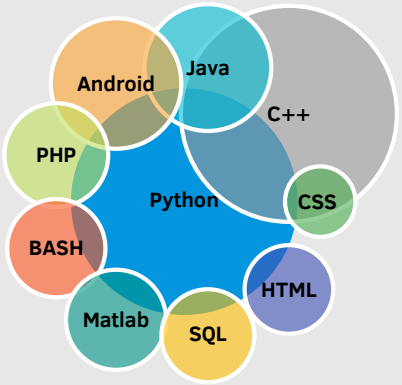
Skills

Overview



Languages



Projects

Comparison of Deep Reinforcement Q-Learning Algorithms - A comparison of Deep Q-Learning and Deep Recurrent Q-Learning using OpenAI Gym
Mixture Density Network - A mixture density network created in C++ for some of my graduate research
Strimko by Resolution - A solver for the game Strimko using propositional logic and inference

Education

2015 - 2017 **PhD, Computational Science (Incomplete)** (GPA: 4.0)
University of Southern Mississippi

2014 - 2015 **MS, Computer Science** (GPA: 4.0)
University of Southern Mississippi

2011 - 2014 **BS, Computer Science,** *summa cum laude* (GPA: 4.0)
University of Southern Mississippi

2009 - 2011 **AA, Computer Science (Transferred)** (GPA: 4.0)
Co-Lin Community College

Experience

Jun 2014 - Aug 2017 **Graduate Research Assistant** University of Southern Mississippi

- Research in applying machine learning and reinforcement learning to various problems in pursuit of publications.
- Co-authored a new undergraduate robotics course.
- Prepared outlines, slides, example code, assignments, and demonstrations for the course.
- Instructed the initial class for the "Introduction to Robotics".
- Set up robotic simulations for research purposes.
- Incorporated computer vision elements into robotics projects.
- Used Deep Q-learning neural networks in many projects.
- Created data sets from simulated robotic sensors to be used with various machine learning algorithms.
- Employed critical thinking and analytical skills in order to solve creative research problems.

May 2013 - Aug 2013 **Undergraduate Research Assistant** University of Southern Mississippi

- Introduction to basic artificial intelligence algorithms.
- Study of more advanced artificial intelligence publications.
- Implementation of basic robotic algorithms using a graphical simulator.
- Contributions towards a multi-robotic algorithm to be submitted for later publication.
- Collaborative effort with a team of peers to develop decision theoretic frameworks for multi-robotic systems.

2000-2009 **Welder, Metal Fabricator, Laborer** DAVCO, FKI Logistex, Various Companies

Publications

B. Banerjee, S. Loscalzo, **L. Thompson** (2016), "Detection of Plan Deviation in Multi-Agent Systems", *AAAI 2016*, pp. 2445-2451

T. Neller, L. Brown, R. West, J. Heliotis, S Strout, I Bezkova, B. Banerjee, **L. Thompson** (2014), "Model AI Assignments 2014", *AAAI 2014*, pp. 3054-3056

Accomplishments

Represented the University of Southern Mississippi at the Association for Advancement of Artificial Intelligence (AAAI) Conference 2016.

Coordinated a 3D printing fundraiser to benefit the School of Computing Graduate Student Association. The event involved the sale of many 3D printed items including 3D prints of individuals created with Microsoft Kinect.