

EDUCATION

Memphis, Tennessee

University of Memphis

Fall 2007 – Summer 2014

PhD. in Computer Science, August 2014, GPA: 3.86

Coursework: Artificial Intelligence, Neural Networks, Programming Languages, Algorithms, Operating and Distributed Systems, Computational Theory, Software Engineering, Machine Learning

M.S. in Applied Computer Science, Concentration in Cognitive Science, May 2009.

Easton, Pennsylvania

Lafayette College

Fall 2003 – May 2007

B.S. in Mathematics; Minor in Computer Science, May 2007. GPA 3.47

Coursework: Algorithms, Computational Theory, Discrete Math, Logic, Software Engineering

TECHNICAL EXPERIENCE

Software Framework (2009 – 2014).

Co-designed and co-developed software framework featuring custom task manager and task API for multithreading, custom graph data structure, software design patterns, extensible GUI, logging support, and XML configuration and loading. Performed JUnit testing and profiling of codebase. *Java, JUnit, XML*

Machine Learning Algorithms (2012 – 2014).

Developed and implemented extensions to Numenta's HTM machine learning algorithms adding hierarchy and support for visual data. Designed and performed a dozen experiments of extensions. *Java, XML*

Software Agent Simulation (2012 – 2014).

Designed and implemented software agent with motivational subsystem that replicates results of a neuroscience experiment. *Java, XML*

ADDITIONAL EXPERIENCE

Instructor (Fall 2013): Taught graduate Artificial Intelligence course

Leader (Fall 2012 – Summer 2014): Research group's computational meeting

Teaching assistant (Summer 2007): John Hopkins Center for Talented Youth Computer Science course

SELECTED PUBLICATIONS

McCall, R. (2014). *Fundamental Motivation and Perception for a Systems-Level Cognitive Architecture* (Doctoral dissertation).

McCall, R. & Franklin, S. (2013). Cortical Learning Algorithms with Predictive Coding for a Systems-Level Cognitive Architecture. *Second Annual Conference on Advances in Cognitive Systems* (pp. 149–166). Baltimore, MD.

McCall, R., Snider, J., & Franklin, S. (2011). The LIDA Framework as a General Tool for AGI. *The Fourth Conference on Artificial General Intelligence Springer Lecture Notes in Artificial Intelligence, 6830*, 133–142.