Gregory Lawrence

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Education

University of California at Berkeley (advisor Stuart Russell)
Ph.D. in Computer Science, anticipated 2009

University of California at Berkeley
B.S. in Electrical Engineering and Computer Science with honors, 1998

Research Experience

University of California at Berkeley, Graduate Student Researcher, (1999 - present)
Developing efficient reinforcement learning algorithms for motor control problems. Improving the learning performance of policy search methods by reasoning about an agent's sensor data. Using these algorithms to optimize controllers for partially observable Markov decision processes with continuous parameters. Learning good controllers for a simulated dart throwing problem and for a simulated quadruped robot locomotion task.

GlaxoSmithKline, Summer Intern, (1998)
Wrote software to analyze the performance of a database system. Designed a prototype expert system to automatically rewrite malformed user queries into the proper format. Created a graphical user interface for a database system.

M.I.T. Lincoln Laboratory, Summer Intern, (1996 & 1997)
Designed software tools to help users reduce, process, and analyze wireless communication signals. This was to be used to measure and compare the attenuation level of signals received during different weather conditions.

Skills

Programming: C/C++ (14 years experience), Matlab (10 years experience), Java, Lisp, Open Dynamics Engine, SD/FAST, Windows, and Unix.

Relevant Coursework: Statistical learning theory, Combinatorial algorithms and data structures, Linear Programming, Knowledge representation, Probabilities and random processes, Linear systems theory, Computer vision, and Natural language processing.

Honors and Awards

National Science Foundation Graduate Fellow.

Graduate Degrees for Minorities in Engineering and Science (GEM) Ph.D. Science Fellow.

Eta Kappa Nu, Electrical and Computer Engineering Honor Society.

Publications

Gregory Lawrence and Stuart Russell. Improving Gradient Estimation by Incorporating Sensor Data. In *Proceedings of the Twenty-Fourth International Conference on Uncertainty in Artificial Intelligence*, Helsinki, Finland, 2008.

Gregory Lawrence, Noah Cowan, and Stuart Russell. Efficient Gradient Estimation for Motor Control Learning. In *Proceedings of the Nineteenth International Conference on Uncertainty in Artificial Intelligence*, Acapulco, Mexico, 2003.

Mark A. Paskin and Gregory Lawrence. Junction Tree Algorithms for Solving Sparse Linear Systems. Technical Report UCB/CSD-03-1271, University of California, Berkeley, 2003.

Workshops

Gregory Lawrence. Improving Gradient Estimation by Incorporating Sensor Data. NIPS Workshop on Robotics Challenges for Machine Learning, Whistler, B.C., Canada, 2007.

Teaching Experience

Teaching Assistant, C.S. 188 Introduction to Artificial Intelligence, U.C. Berkeley, Fall 2004.

Teaching Assistant, C.S. 188 Introduction to Artificial Intelligence, U.C. Berkeley, Spring 2002.

Academic Services

Graduate student reviewer, U.C. Berkeley EECS Graduate Admissions, 2008-2009.

Active member, Black Graduate Engineering and Science Students, 2005-2008.

System Administrator, Black Graduate Engineering and Science Students, 2003-2004.

Panel Member, "Defining and Sustaining Quality Mentoring", Richard Tapia Conference 2003.

Vice President, Black Graduate Engineering and Science Students, 2001-2003.

System Administrator, Black Graduate Engineering and Science Students, 1999-2001.