Patrick F. Riley

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OBJECTIVE

To apply advanced artificial intelligence and machine learning techniques in the design and implementation of systems, especially those which process large amounts of data or model the behavior of humans or agents

EDUCATION

Carnegie Mellon University, Pittsburgh PA

Ph.D. in Computer Science 2005

Thesis in Artificial Intelligence/Machine Learning

M.S. in Computer Science 2002

B.S. in Computer Science 1999

3.9 cumulative GPA, double-major in philosophy, minor in math

SUMMARY OF QUALIFICATIONS

- Strong research background in artificial intelligence and machine learning
- Developed and maintained reasonably sized software systems, both individually and collaboratively
- Served in leadership roles and as a team player

ACADEMIC BACKGROUND

- Ph.D. thesis titled “Coaching: Learning and Using Environment and Agent Models for Advice” addresses how an autonomous coach agent can use observations to learn models in order to provide advice to other agents on how to act
- 16 refereed conference publications
- Best Paper Award at Sixth International Conference on AI Planning and Scheduling (AIPS-2002)
- RoboCup Engineering Award 2003
- National Science Foundation Graduate Research Fellowship

SKILLS AND PROFESSIONAL ACCOMPLISHMENTS

- Joint founder, designer, and manager of the RoboCup (http://www.robocup.org) simulated robot soccer coach competition, where AI coach agents provide advice to a team of agents. In charge of running coach competitions as part of Organizing Committees (2002,2003,2005) and providing direction and making design decisions as part of Technical Committees
- Managed a three person team which created AI agents which understand advice. Required integration of two separate C++ code bases, with significant new code design and implementation for a 40,000 line final product
- Core developer in team of 3 to 6 people that maintained and added features to the Soccer Server (http://sserver.sf.net), a simulation system used by hundreds of researchers worldwide (1999-2002)
- Designed, wrote, and maintained SPADES (http://spades-sim.sf.net), a 25,000 line C++ middleware system for distributed agent simulation that provides networking, time management, and agent management services. Used as substrate for the new RoboCup 3D simulation server
- Significant C++ experience including 100,000 lines written for thesis research

OTHER WORK EXPERIENCE

- Summer 2000, Research Intern at Draper Laboratory
- Summer 1997, Software Developer Intern at Microsoft