Joshua A. Bryan

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OBJECTIVE

A position in the field of software engineering with special interests in artificial intelligence, data mining, and multi-agent systems.

EDUCATION

Doctoral Student, Computer Science ABD as of May 2011
University of Illinois at Chicago
Emphasis on probabilistic reasoning in multi-agent systems and artificial intelligence.

Masters of Science, Computer Science Graduated December 2009
University of Illinois at Chicago
Thesis: Approximate Opponent Modeling in Kriegspiel

Bachelor of Arts, Computer Science Graduated December 2004
University of Missouri at Columbia
Minor: Music Performance
Cum Laude

COMPUTER SKILLS

Languages & Software: Python, Ruby, Java, C/C++, PHP, SQL, LaTeX, HTML, Javascript, Perl, Matlab, Subversion, Git, Perforce
Operating Systems: Linux (Debian and Redhat based distributions), Unix, Windows, MacOS.

EXPERIENCE

Programmer May 2011 – Present
University of Chicago, Computation Institute
Chicago, IL
- Developed group management software using python with a Cassandra database.
- Architected ontology based policy enforcement engine for resource management using RDF.
- Implemented improved software development and deployment processes leveraging Git and Chef.

Research Assistant May 2009 – May 2011
University of Illinois at Chicago
Department of Computer Science, Multi-Agent Systems Lab
Chicago, IL
- Researched algorithms for efficiently solving Partially Observable Markov Decision Processes in Multi-Agent Systems.
- Designed high performance logic programming language in C++.
- Studied compact representations of state space in particle filters.
- Managed laboratory servers, websites, and other electronic resources.

Software Engineer June 2008 – April 2009
CashnetUSA.com (presently Enova Financial)
Chicago, IL
- Developed and maintained web based short term loan application system in Ruby.
- Helped develop and integrate open source SMPP protocol library for sending text messages.
- Developed VOIP based automated answering service using Asterisk.

Freelance Software Developer   April 2006 – June 2008
Self Employed
Chicago, IL

- Developed internal and external web applications using the LAMP stack for a variety of clients including:

    - Inspired Concepts, Inc. (`http://www.yojournal.com`)

    - National Runaway Switchboard (`http://www.1800runaway.com`)

    - Patti Gay, Artist (`http://www.pattigay.com`)

- Developed internal Java based supply chain routing optimizer for Build-A-Bear Workshop.

Programmer   April 2005 – April 2006
Innerwise Inc. (d/b/a ItsYourDomain.com)
Schaumburg, IL

- Developed software to sell domain names and related services in a Linux / Apache / MySQL / PHP environment.
- Developed back-end software using Java to integrate registry Extensible Provisioning Protocol services with web based sales and account management.

Consultant   June 2004 – April 2005
Purple Tree Technologies
Columbia, MO

- Researched technologies and standards for cell phone data transmission.
- Designed and program proof of concept demonstrations.
- Coauthored a patent for a cellular emergency alert system.

Private Music Teacher   March 1999 – April 2005
Self Employed
Columbia, MO

- Taught a wide range of students (ages 5 to 35) percussion instruments and styles ranging from Classical to Jazz, Pop, and Rock.
- Maintained a studio of 7 to 10 students for 6 years.

PUBLICATIONS   **Patents**

Karl, Maurice W., and Joshua A. Bryan. "United States Patent: 7616942 - Alert system and personal apparatus," November 10, 2009.

Workshop Papers

Bryan, Josh, Piotr Gmytrasiewicz, and Antonio Del Giudice. "Particle Filtering Approximation of Kriegspiel Play with Opponent Modeling." Workshop on Multi-agent Sequential Decision Making at the International Conference on Autonomous Agents and Multiagent Systems, Budapest, Hungary, 2009.

REFERENCES   Available upon request.