Joshua A. Bryan

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EDUCATION

Masters of Science, Computer Science — Graduated December 2009
University of Illinois at Chicago
Emphasis on optimal planning in stochastic multi-agent systems and artificial intelligence. Thesis: Approximate Opponent Modeling in Kriegspiel

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

EXPERIENCE

Managing Director, Co-Founder, Head of Engineering — January 2016 – Present
TNX, Limited
Chicago, IL

- Architected and led implementation of AI powered freight tendering and transportation planning tool.
- Hired and managed development team to build and support the TNX product and platform.
- Worked with founding team and other stake holders to plan, prioritize, and implement the product roadmap.

Director, Technology — January 2014 – January 2016
GT Nexus (presently Infor)
Chicago, IL

- Continued development of optimization tools acquired from Clear Abacus.
- Worked with engineering and product teams spread across multiple continents to design and implement a cloud based Transportation Management System.

Director of Technology, Co-Founder — March 2013 – December 2014
Clear Abacus
Chicago, IL

- Developed efficient algorithms and languages for optimizing multimodal transportation planning problems.
- Architected massively parallel platform for managing large concurrent combinatorial optimization tasks.
- Worked with co-founder to manage financial, operational, and legal aspects of a startup navigating the company from conception to acquisition.

Programmer — May 2011 – February 2013
University of Chicago, Computation Institute
Chicago, IL

- Developed high availability multi-tenant SaaS platform for Big Data management and High Performance Computing (GlobusOnline.org).
- Joint appointment at Argonne National Laboratories.

Researcher — May 2009 – May 2011
University of Illinois at Chicago

Department of Computer Science, Multi-Agent Systems Lab
Chicago, IL

- Researched algorithms for efficiently solving stochastic planning problems in multi-agent environments.
- Designed high performance logic programming language in C++.
- Studied efficient approximate optimization algorithms for complex decision problems.

Software Engineer June 2008 – April 2009
CashnetUSA.com (presently Enova Financial)
Chicago, IL

- Developed and maintained short term loan application system in Ruby.
- Developed and integrate SMPP and VOIP systems for handling high volume voice and text traffic.

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

- Developed supply chain routing optimizer for Build-A-Bear Workshop using advanced combinatorial optimization techniques.
- Developed internal and external web applications for a variety of clients.

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 services with web based sales and account management.

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

- Designed and program proof of concept demonstrations.
- Coauthored a patent for a cellular emergency alert system.

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.

SKILLS

Algorithms & Techniques: Meta-heuristics, mixed integer programming, machine learning, constraint programming

Languages & Software: Python, C/C++, Ruby, Java, SQL, HTML, Javascript, Perl, Matlab, MiniZinc, Git, Perforce, TensorFlow, LaTeX