

TUDOR HULUBEI

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SENIOR SOFTWARE ARCHITECT / PRODUCT MANAGER

10+ years of progressive industry experience, including roles as Senior Software Developer, Senior Software Architect and Team Leader with consistent success in driving business growth through technology solutions. Co-founded software company – and architected core product – that grew from start-up to \$4 millions in revenue and 80 employees in two years. Created UNIX kernel, Thix, at age 22. B.Sc., M.Sc., Ph.D. in Computer Science.

- ❖ Senior-level software architect, management professional and analytical/creative thinker with a solid track record leading design and implementation of critical applications/components to meet strategic business goals.
- ❖ Proven ability to lead technical teams and drive improvements. Skilled in aligning technology with business objectives to achieve revenue and profit gains, improve productivity and performance.

— Core Knowledge and Skill Areas —

Software Architecture/Integration • Software Project Management • Business Requirements Strategic Analysis
Research & Development • Product Concept / Development Strategy • Leadership & Team Building
Cross-Functional / Cross-Departmental Communications • Vision & Long-Term Planning

PROFESSIONAL EXPERIENCE

Ph.D. in Computer Science – 2003-Present, expected April 2007

EMC CORPORATION / ASTRUM SOFTWARE CORPORATION – Cambridge, MA – 2003

Senior Software Developer

- ❖ **Architected system for remote agent installations of UNIX systems, with patent application in 2004.** Developed UNIX / Novell Netware agents for storage management solution VisualSRM.

ECORA SOFTWARE CORPORATION – Portsmouth, NH – 1999-2002

Co-founder / Senior Software Developer / Team Leader

Member of senior management team; shared with VP of R&D responsibility for overall architecture of product line and development of major components of core system, for bringing enterprise solutions to market and reviewing designs for all company products. Provided technical guidance to developers from all groups.

Selected Projects and Accomplishments:

- ❖ **Architected company's core product offering, receiving U.S. patent award for technology system that documents, monitors, and audits networks and applications.** Built code infrastructure that allowed for rapid growth of product line and improved market/industry awareness of the company.
- ❖ **Architected and developed company's enterprise solution that generated over 90% of revenue stream.** Used Linux-based Qube2/RaQ application servers as platforms and directed integration of components within final product, meeting tight release deadline.
- ❖ **Played key role in growing company from 3 to 80 employees and \$4 millions in annual sales within 2 years,** assisting in increase of Ecora's profile that included "10 Start-Ups to Watch" recognition from NetworkWorld in 2001.

ECORA SOFTWARE CORPORATION, Continued

- ❖ **Designed and developed core components that included constraint solver, XML/XML-Schema Parser, SQL-based back-end, document generation system, Apache-based authentication system, internationalization library, and remote data acquisition method for UNIX systems and Cisco routers.**
- ❖ **Saved company 5% in development costs by reversing a decrease in code quality through development of a method for strict enforcement of consistency in coding practices.**
- ❖ **Distinguished as 1st recipient of company's Fellowship Award.**

VARELIUS SYSTEMS CORPORATION – Montreal, Canada – 1995-1996

Independent Consultant

- ❖ Designed and implemented commercial websites.

NEURON, LTD. – Bucharest, Romania – 1993

Software Engineer

- ❖ Designed and implemented text-rendering engine of Geographical Information System used by the military.
- ❖ Implemented parts of map layout and triangulation code used to track sources of radio signals on city map.

EDUCATION & CREDENTIALS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA (2006-2007)

- ❖ Visiting Ph.D. Student, Model-Based Embedded and Robotics Group.

UNIVERSITY COLLEGE CORK, Ireland (2003-2007)

- ❖ Ph.D. in Computer Science, expected May 2007
 - Thesis: Optimal Refutations for Constraint Satisfaction Problems.

UNIVERSITY OF NEW HAMPSHIRE, Durham, NH (1996-1999)

- ❖ Master of Science in Computer Science (GPA: 3.73/4.0)
- ❖ Teaching/Research Assistant
 - Designed and implemented C++ toolkit for analyzing constraint-based reasoning algorithms.
 - Instructed students in operating systems and C programming language.
- ❖ Internship – Concentra Corporation, Burlington, MA (1998)
 - Developed A.I.-based method for optimizing configuration and upselling of products. Subsequently presented method at Constraint Programming Conference in Alexandria, VA, 1999.
- ❖ Internship – Sun Microsystems, Chelmsford, MA (1997)
 - Enhanced benchmarking platform for comparing Sun's FORTRAN compiler with competing products.

POLITEHNICA UNIVERSITY OF BUCHAREST, Romania (1990-1996)

- ❖ Master of Science in Computer Science (GPA: 4.0/4.0)
- ❖ Bachelor of Science in Computer Science (GPA: 3.74/4.0)
- ❖ Teaching Assistant (1996)
 - Led team of students working on file system drivers, virtual memory paging algorithms, file system abstraction layers and other extensions to Thix, a UNIX kernel of my own design.
- ❖ System Administrator (1995-1996)
 - Contributed to development of Romania's 1st academic network with Communications Center team.
 - Installed and maintained equipment required to provide network connectivity to several universities.

AWARDS

- ❖ ACM Eastern Preliminaries, Harvard University, Cambridge, MA - 4th place (1997).
- ❖ UNH ACM Chapter, Durham, NH - 2nd place (1997).
- ❖ Scientific Communications, Bucharest, Romania - 1st place (1989, 1992), 3rd place (1991, 1993).
- ❖ Tempus DISCO scholarship at Vrije Universiteit, Amsterdam, The Netherlands (1995).

PUBLICATIONS

- ❖ "Failure Analysis in Backtrack Search for Constraint Satisfaction", Twelfth International Conference on Principles and Practice of Constraint Programming, September 2006, Nantes, France.
- ❖ "Heavy-tailed Runtime Distributions: Heuristics, Models and Optimal Refutations", Twelfth International Conference on Principles and Practice of Constraint Programming, September 2006, Nantes, France.
- ❖ "The Impact of Search Heuristics on Heavy-Tailed Behavior", Constraints Journal, Volume 11 - Special Issue of the 11th International Conference on Principles and Practice of Constraint Programming.
- ❖ "Search Heuristics and Heavy-Tailed Behavior", Eleventh International Conference on Principles and Practice of Constraint Programming, October 2005, Sitges, Spain.
- ❖ "Optimal Refutations for Constraint Satisfaction Problems", Nineteenth International Joint Conference on Artificial Intelligence, August 2005, Edinburgh, Scotland, UK.
- ❖ "The Goldilocks Problem", Fifth International Conference on Principles and Practice of Constraint Programming, October 1999, Alexandria, VA, USA.
- ❖ "Free Software and Romania - Achievements and Opportunities", Third International Symposium on Multilingual Information Processing, March 1999, Tsukuba, Japan.
- ❖ "The Thix Operating System", The Romanian Open Systems Conference and Exhibition, November 1994, Bucharest, Romania.

PROJECTS

- ❖ **Thix**: complete, open-source, modern Unix kernel, featuring virtual memory, swapping, preemptive multitasking, fast file system, I/O drivers. Full Unix compatibility, running GCC and other GNU development tools, reviewed in 2005 as course project in the Department of Computer Science at University of Salzburg.
- ❖ **CSP**: open-source C++ constraint programming library designed as a platform for developing, evaluating, and experimenting with new combinatorial search algorithms. Includes innovative tools for the visualization and analysis of optimal refutations.
- ❖ **GNU Interactive Tools**: file manager and administrative tools. Copyright donated to the Free Software Foundation for inclusion in the GNU Project. Distributed as part of the original RedHat Linux distribution.
- ❖ **CSlang**: C language interpreter.
- ❖ **JC**: non-optimizing Java compiler.
- ❖ **Hulubei.Net**: multi-project, revenue generating, elaborate XHTML/Web 2.0 website, with sophisticated support for photo albums, Google AdSense advertising, WordPress/PHP-based blogging, and integrated automatic translation. Website pioneered contextual advertising revenue from photographs using Google AdSense. Strategy documented in comprehensive tutorial.

TECHNOLOGY SKILLS

- ❖ **Software**: C, C++, Lisp, JavaScript, Shell, Perl, PHP, HTML, XML, SQL, TCP/IP.
- ❖ **Platforms**: Linux, UNIX, Mac OS, Windows.

OTHER INTERESTS

- ❖ Photography (<http://hulubei.net/tudor/photography>), Web Design, Music Performance.