

Patrick Flanigan

Senior Software Engineer

Patrick Flanigan

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Bio

At the start of my career I was a researcher at the University of Illinois - Urbana-Champaign. I was a technical lead and architect for the Software Development Group at the National Center for Supercomputing Applications (NCSA). While there I developed an innovative distributed computing system called Symera. It leveraged network services to build dynamic, decentralized clusters as well as support libraries for porting legacy applications. I presented Symera to Microsoft as a possible replacement for their Wolfpack clustering solution. After leaving NCSA I worked for a handful of startups including an interactive, mentor-based educational company called Useractive. Here I built a web browser terminal emulator by rewriting PuTTY as a COM control, a lightweight XML-based desktop event recording system called MacroMentor, and SafePassage - an SSH-tunneling client. Useractive was acquired by O'Reilly Publishing. I then spent three years at NCSA as a network security engineer. My work focused upon Mithril - an intrusion detection and response system. I also completed research work with Software Defined Radio (SDR). Later I designed a real-time distributed performance monitoring system for Sears which handled approximately 2000 business servers. My most current position was with a Finnish company called Swap.com. I was the lead backend engineer at the warehouse in Chicago. My work included innovative UI development for merchandising, designing the shipping workflow software and building a production training and testing environment. I have always gravitated towards challenging, innovative work. I enjoy creative, collaborative environments which aspire to build exceptional and essential solutions to complex problems.

Skills

Python, C/C++, Javascript, SQL, Bash, Linux,
GAE, Django, Flask, LAMP, ReactJS, NodeJS
Redis, ZeroMQ, SDR, HPC, MongoDB

Experience

Swap.com/Netcycler / Senior Backend Engineer

Sep 2014 - Apr 2018 Chicago IL - Helsinki FN

Designed and built the warehouse merchandising and shipping software.

NPV Advisors / Systems Engineer

Sep 2013 - May 2014 Chicago IL

Upgraded legacy commercial real estate property valuation tools.

Sears Holdings Corporation / Systems Engineer

Oct 2011 - Oct 2012 Chicago IL

Redesigned server performance monitoring for the Online Business Unit.

SkillBott Assessments / Software Developer

Jun 2011 - Nov 2011 Chicago IL

Built career assessment tools based upon interests, skills and valuations.

WebXLS / Software Developer

Feb 2009 - Jul 2010 Chicago IL

Created a centralized FSBO real estate site built upon third-party data.

PolySystems, Inc. / Senior C/C++ Engineer

Oct 2008 - Feb 2009 Chicago IL

Ported a distributed actuarial computational system to Microsoft HPC.

NCSA / Senior Security Engineer

Jan 2005 - Aug 2007 Champaign IL

Designed and implemented Mithril network security tools and systems.

Useractive, Inc. / Senior Software Developer

Aug 2001 - Dec 2004 Champaign IL

Built educational products MacroMentor, COMpuTTY and SafePassage.

MedExpert, Inc. / Technical Development Manager

Feb 2001 - Aug 2001 Champaign IL

Built medical info tools FAME (Find a Medical Expert) and MedMan.

KnowItAll, Inc. / Software Developer

Mar 1999 - Sep 2000 Austin TX

Created HumanHelp - a distributed, real-time customer support system.

National Center for Supercomputing Applications (NCSA) / Software Engineer/Architect

Aug 1996 - Sep 1999 Champaign IL

Built Symera - a COM/DCOM distributed cluster computing system.

Computational Modeling Labs / Software Engineer

Aug 1993 - Aug 1996 Champaign IL

Built C/C++ emulations of a legacy population projection tools.

Education

University of Illinois

Urbana-Champaign, IL

Mathematics/Linguistics

US Air Force Academy

Colorado Springs, CO

Physics/Mathematics

Publications

[Dynamic Policy Enforcement for Software Defined Radio](#)

[Mithril: Applying Adaptability for Survivability](#)

[Mithril: Adaptable Security for Survivability](#)

[NCSA Symera: Dr Dobbs Journal](#)