

# Patrick Boyd

Software Architect / Engineer

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## OBJECTIVE

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Lead the design and development of interactive systems to educate and empower communities using the latest web technologies and accessibility standards, harnessing mobile, web, and cloud-based technologies.

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## QUALIFICATIONS

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- Competencies:** System design, UML diagraming, Unix system admin, network infrastructure, LAMP stack, Agile, JIRA, LDAP, apache httpd, varnish, memcache, MySQL, tomcat, svn, git, cvs, hg, gpg encryption, bash, Rackspace Cloud, AWS, OAuth, Shibboleth, build automation, unit testing, data analysis, Jenkins CI, Photoshop, Flash, Dreamweaver, OmniGraffle, Xcode, VMware, emacs
- Languages/ Libs:** PHP, HTML, CSS, JavaScript, Java, C#, ActionScript 2&3, XML, UML, SQL, PERL, Objective-C, YUI, jQuery, Festvox, OpenAMF, Lingo, GD2, ImageMagik
- Platforms:** HTML5/web, Unity3D, Flash/AIR, LMS/SCORM, Linux, Windows, Mac, iOS, Android, Arduino
- Standards:** Capable of developing according to current WAI and W3C web standards.

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## WORK EXPERIENCE

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### Lead Software Architect

Kognito Interactive – New York, NY

2008-Current

- Designed and implemented “Doo plo”, a modular conversation simulation platform composed of a runtime environment, content delivery portal, and content authoring portal. (*LAMP, HTML/javascript*)
- Streamlined workflow for creation of activity content, including automated speech synthesis
- Ported legacy flash platform to C# unity3d enabling realtime 3d characters & mobile device runtime
- Designed and implemented “KNET”, a modular LMS, providing: internal client management portal, public client reporting portal with on demand xls file generation, SDK for custom client HTML landing pages

### Senior Programmer

Avatar New York – New York, NY

2005-2008

- Developed a JavaScript/PHP API capable of real-time generation of PDF documents, and direct printer output, part of an AJAX based inventory management system.
- Developed a PHP based image manipulation class, for dynamic image creation.

### Programmer / Technician

Freelance IT Consultant – Metro Boston / New York

2003-2005

- Provided end user support for both hardware and software in an office environment.
- Developed custom LAMP based solutions for email management, e-commerce, user collaboration, news & event tracking, event ticketing and social networking forums.

### Systems Technician

Integrated Command Systems – Springfield, MA

2003

- Responsible for on site support and maintenance of Windows PC/ RS-485 computer systems custom designed for use in the maintenance and fueling garages of the MBTA. The system provides a garage-proof interface to control fuel pumps, and RFID based usage and maintenance data tracking for each bus.

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## RECENT PROJECTS

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### Change Talk

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Role: Lead developer

A project done in cooperation with the American Association of Pediatrics designed to engage families and pediatricians in a simulated conversation about Obesity. The project provided an opportunity to port over the company's existing flash based platform (*DOOPLO*) to Unity3D / C#, which incorporates a fully interactive 3D environment which is distributed for iOS, Android, Windows Phone, and modern web browsers via 3rd party plugin.

- Key technologies: C#, Unity3D, LAMP
- Utilized "DOOPLO Platform" to drive the narrative logic and realtime animated content

### Dooplo Unity3D Plugin

=Kognito Interactive

Role: Architect & Engineer

A plugin for Unity3D which provides an interface between the company's conversation authoring tool "DOOPLO" via a REST API. It was developed using C#, LAMP and Unity3D built-in GUI as a part of the platform migration from flash to Unity3D. It provides automation and workflow optimizations in the following areas:

- Narrative sequences to a custom timeline editor, designed for animators familiar with flash content workflow
- Synthesis of auto and automated lip-syncing for pre-visualization of authored narratives
- Importing of text captions for section 508 accessibility meta data
- Custom integrated IDE tools for animators to facilitate character animation and dialog lip-syncing

### SeekChange - Emotional Fitness Mobile App

Seekchange Inc.

Role: Technical Lead

The goal of Seekchange is to "put a personal life coach in your pocket". Activities include: daily checkins, mood tracker, multi day workouts, customized dashboard for coaches working with users thru app based relationships.

- Key technologies: HTML5, javascript, cordova/phonegap, push notifications, build automation
- Implemented HTML5 application running with cordova, providing a native application user experience

### KNET Platform

=Kognito Interactive

Role: Architect & Engineer

The platform was developed to distribute the company's web based products to clients via the internet. It consists of several modules which enable different teams to collaboratively work with each other, integrated thru the public API.

- Client manager portal allows client managers to access their client's information
- Customizable html landing page SDK Framework and API enables customized landing pages for clients
- Platform agnostic LMS used for hosting of all public facing products, including progress tracking
- Administration portal providing realtime reporting of learner stats delivered as Excel spreadsheets

### Cisco Networking Academy

Cisco Systems

Role: Senior Programmer

The Cisco Networking Academy is an online learning system, learning comprised of a Teacher collaboration portal running the LifeRay portal framework, LMS running Moodle to distribute and engage users with learning content.

- Implemented custom Moodle authentication module combining Shibboleth, LDAP and CNAMS
- Ported internal Moodle SQL and database to be compatible with Oracle working in a agile team