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VALUE PROPOSITION

A Senior Software Developer with over 14 years of experience architecting and building enterprise web applications from end to end. Experience includes delivering stable, robust software architectures to organisations from Lehman Brothers to Conde Nast, on time and on budget. Skills include Managing Agile projects, Systems Analysis and Design, Functional Programming, DSL and Language Design, Artificial Intelligence & Neural Networks and Object-Oriented Design, with contributions to the open source community.

OPEN SOURCE PROJECTS

Edgar

Edgar is a basic tool for performing Technical Analysis on financial instruments (see here and repo). It is currently a working system that i) collects historical and live tick data and calculates statistical indicators. Lagging Indicators (Moving Averages, Bollinger Bands), Leading Indicators (Stochastic Oscillator, MACD) and Confirming Indicators (On Balance Volume, Relative Strength Index). As well, there are other goodies like Relative Strength Index (RSI) and Price Divergence.

Edgar is meant to leverage the power of Clojure in this domain. A feasible Clojure alternative, along the lines of TradeLink (see here) or Open Java Trading System (see here).

Bkeeping

Bkeeping's (bkeeping.com) value proposition is to use a simple and intuitive interface to save the user time and headache. It lets them quickly and easily manage their account and journal data within 2 or 3 steps. Managing up to 4 developers and designers, I architected and built the original Java version using *i)* Bob, an XML/Java binding tool, *ii)* a custom DSL and web 2.0 technologies. The latest version, Bkeeping.com, is currently a Clojure implementation (Clojure ,Coffeescript and MongoDB) of 'Bookkeeping' in about 1/10th the amount of code. I was able to replace several important modules, including i) a custom XML/Java binding framework (like XMLBeans), ii) an XPath interpreter, and iii) a custom language and shell interpreter. This project is based on the work in these projects:

- **Bookkeeping**: I architected and implemented a double-entry bookkeeping system and its shell environment (see repo).

- **Bkeeping**: I designed and implemented the programming language 'Bkeeping' for specialized accounting tasks. (part of the *'Bookkeeping'* package)

- **XMLas**: I designed and built an XML/Javascript binding library. It is analogous to Bob (or XMLBeans), but written in Javascript.

Clnn

Machine Learning and Artificial Intelligence is the science of getting computers to act without being explicitly programmed. Clnn is an exploratory project in Neural Networks; a particular branch of Artificial Intelligence (see repo). It uses a Simple FeedForward NeuralNetwork (using BackPropagation; see reference), and is tested on EURUSD forex price time series.

Bob

I designed and built an XML/Java binding library, similar to XMLBeans. Bob lets you access and manipulate the data contained in an XML document using Java classes. It also contains an XPath implementation, for declaratively locating nodes in your object tree (see below, and repo):

- **XPath 2.0**: XPath 2.0 (the language) is a language for selecting a node or set of nodes in an XML document. XPath2.0 (the software) is a Java implementation of the language (see repo). It is part of the *'Bob'* package. It gives users the ability to select a node or set of nodes in their generated 'Bob' object trees. This makes it easier for users to do fine grained selection and manipulation of their generated object trees.

COMPUTER SKILLS

Languages / Tools: Clojure, Clojurescript, CoreAsync, Digital Signatures (wss4j), Coffeescript, Backbonejs, Requirejs, OpenID, Purejs, Javascript State Machine, Twitter Bootstrap, NoSQL (MongoDB, CouchDB, Datomic), Ruby / Rails, Rake , RSpec, J2EE/Java, Java Threads, O/R Libraries (Hibernate, Torque), Spring, EHCache, JPA, JAXB, JAX-WS, JAX-RS, JMS, Tibco, SQL, Groovy, Grails, EJBs, Servlets, JDBC, XML, XSL/XSLT, XPath, XQuery, Javascript, HAML, SCSS, sh/bash, vim, emacs, git, ant, make, shell scripts
Methodologies: Functional and OO Programming, DSL and Language Design, Artificial Intelligence & Neural Networks, Managing Agile projects, Systems Analysis and Design, Rich Internet Applications
Platforms / Operating Systems: Websphere, Oracle (8i, 9i, PL/SQL), Solaris, Linux (incl. Redhat, Mandrake), Weblogic, JBoss, Tibco, Tomcat, Jetty, DB2, MySql, Apple OS X, AIX

PROFESSIONAL EXPERIENCE

03/2004 - Present   Founder & Principle:: **Interrupt Software**   Toronto Canada

Interrupt Software, a premier software development boutique, offers advanced functionality and design excellence. We strive to future-proof your solutions leveraging your investment for long-term impact. So there's a great deal of value in a well thought out solution. We create and utilise the best tools possible, to identify the problem and craft a solution that creates a tremendous amount of business value. Projects include the following.

04/2014 - 12/2014   Consultant:: BioIQ, Health Technology   Santa Barbara USA
Designed and built a real-time notification component, between BioIQ and a Fortune 500 partner. Messages are transported over AWS SQS and HTTP SSL. The component uses Clojure, Core.Async, and Digital Signatures (wss4j) to cryptographically sign messages. I also designed and built a Ruby on Rails component to send BioIQ's claims billing information to a Fortune 500 partner. The business case being that clients don't have to pay out of pocket for health screening services. The component collects patient and claim information, and builds a message in the HIPPA legislation mandated X12 format (see stupidedi). My role also includes other ongoing important business feature requests.
technical environment: Clojure, Core.Async, Digital Signatures (wss4j), Ruby, Rails, X12 (stupidedi)

11/2013 - 4/2014   CONSULTANT, Professional Markets:: Bank Of America, Banking   New York USA
Team member building, deploying and maintaining Front Office functions. Specifically, this is a Trade Processing solution for the Portfolio Trading group. The tool includes a cross-asset fee and charge calculation engine.
technical environment: Scala, JMS, EH Cache, High Performance Pub/Sub, Oracle

10/2011 - 04/2013   CONSULTANT:: Storydesk, iPad Marketing Startup   Toronto Canada
I built the CloudEditor. The CloudEditor (CE), as covered in the Wall Street Journal and on CNBC, is a Single Page Application. It is is Storydesk's web editing tool. It allows for immediate changes to an app. Text, photos, videos, and design elements can be easily adjusted on the fly, without any technical expertise. Changes appear in real time, on all iPads, as soon as the tablet is reconnected with the network.
technical environment: Coffeescript, Requirejs (AMD), Backbonejs, JQuery, HAML, SCSS, Compass CSS

11/2009 – 12/2010 CONSULTANT:: Rogers Digital Media, Publishing   Toronto Canada
Designed and built CASH (Content Aggregation and Syndication Hub) enhancements. Managed a small team to get the job done in under 3 months. Playing a Senior technical role building new content hub for all of Rogers' digital properties.
technical environment: Weblogic, XML, XSLT, Groovy, Teamsite (Enterprise CMS), Javascript, Java/J2EE, Oracle, JQuery, Javascript

01/2008 – 12/2008 JAVA ANALYST:: Conde Nast, Publishing   New York USA
Portfolio.com is the web edition of Portfolio business magazine. The magazine won a National Magazine Award last year after publishing only a handful of issues, a rare accomplishment. Contributions include design and implementation of portions of the homepage redesign (see the sections under "Inside Portfolio"). Also implemented 3 community features under "Portfolio Insider" (journals, recent events, author alerts). I also maintained and built functionality to our editor authoring tool, Teamsite.
technical environment: Websphere, XML, Spring, Hibernate, JPA, AJAX, EHCache, Eclipse, Oracle, SQL, Java 1.5., Groovy, Grails, Editor tools were done using Teamsite (Enterprise CMS), Javascript, Perl

10/2006 – 12/2007 CONSULTANT:: Deutsch Bank (c/o CGI), Financial Services   New York USA
Deutsche Bank uses the Global Financing Calculator (GFC) application to manage detailed client information and calculate interest pricing information. Responsibilities included mapping existing data structure to object structure. Also architected the application tier responsible for data CRUD operations, and transport it to a Web-interface layer. Also, designed data transformation functionality that allowed the web tier to create, retrieve, update, and delete data in the data tier.
technical environment: AJAX, EJB (stateless session), Design Patterns (Visitor, Composite), Spring, Sybase, JSF (MyFaces), Tiles

10/2005 – 09/2006 COMPUTER ANALYST:: Lehman Brothers, Financial Services   New York USA
Client needed a way to manage their Fixed Income securities in a Financial Trust. Designed and implemented a Trust Management application with another developer. Also, sped development time by introducing and implementing an XML Object binding framework (Sun reference JAXB implementation) that significantly reduced developer XML translation effort.
technical environment: Java, JAXB, JAX-RS, Hibernate, SQL/PL SQL, JMS, Tibco, XML, Ecplise, MS Visual Studio.NET, Windows XP

03/2004 – 12/2005 SR SOFTWARE CONSULTANT:: Bank of Montreal (IFL),   Toronto Canada
Built a Rich Internet Application (RIA) framework / platform for a knowledge-management application (similar to: laszlosystems.com). Developers leveraged the framework to build a UI system that was flexible, reusable, and separated data from application logic. Helped collect and define goals by introducing documentation and a requirements process. Prototyped the application, introducing component reuse through object patterns. Delivered a platform which reduced development time, increased the software solutions available to developers and increased system flexibility by giving developers fine-grained control of object and movie definition.
technical environment: XML, Xpath, ECMAScript (Actionscript 1.0 - 2.0 / Javascript), AJAX, Flash MX / MX 2004, Flash Remoting, C#, MS Visual Studio.NET 2003, Windows 2000 / XP

03/2003 – 12/2003 SENIOR SOFTWARE CONSULTANT:: Recursive Design, IT Consulting   Toronto Canada
Built a Rich Internet Application (RIA) framework / platform that was reusable across multiple applications. The custom, lightweight solution, Guibuilder, generated user interface components and behaviour from XML definitions. This tool led to the company-wide adoption of the "Laszlo Presentation Server" (LPS), a fully supported 3rd party RIA platform. LPS features reduced development time, increased UI robustness and reliability and was reused across multiple applications. Tasks included work on functionality for 3 projects. Utilized the LPS for a web app suite for building virtual communities and portals, a back-office system for a bank with loan and collateral management functionality, and for the user interface of trading-partner software.
technical environment: Java, Servlets, XML, AJAX, Flash, Laszlo Presentation Server (LPS), OO Scripting (Actionscript 1.0, Ruby), LDAP, JBoss, Tomcat, Jetty, Apple OS X, Linux

2002 - 2003 INTERMEDIATE SOFTWARE DEVELOPER:: The SPi Group, IT Consulting   Toronto Canada
Enhanced performance and debugged errors of the HubConnector, an XML/flat file processor written in C++, and Oracle's XML parser. The HubConnector was Trading Partner Software for the majority of Ontario's independent electricity operators. It transfered business messages between Ontario's electricity clearinghouse operators. Responsibilities included releasing product upgrades with bug fixes, performance and memory improvements, and documentation. Reduced their overall system downtime.
technical environment: Java, JBoss, XSL/XSLT, XML, Torque(Object Relational library), C/C++, Visual C++ 5.0, .CSV/Flat File, Oracle 8i, Oracle PL/SQL, Windows 2000

2001 - 2002   J2EE CONSULTANT:: Swiss Re, et. al. (c/o Cognicase), IT Consulting   Toronto Canada

Increased application performance and improved application access for a non-profit, community service organisation. Web-enabled a window-based user management application with the ability to search and match facilities and housing information. Implemented administration functionality for groups using Struts MVC framework. Refactored Entity EJBs to reflect an updated data model and created 7 web administration screens to manage client data.

technical environment: J2EE,(EJBs, Servlets, JSPs) , Struts, JAX-WS, JUnit, Log4J, Windows 2000, Visual Age 4.0, Websphere 4.0, Visual Source Safe

2000 - 2001   JAVA DEVELOPER:: Channelwave Canada, CRM Software   Toronto Canada

EConversations was an online selling tool, simulating human conversation. It used fuzzy reasoning to match users with products or solutions. As part of an Agile team, I used TDD, an XML-based object design and proven design patterns to implement functionality. Implemented several value-added features which helped the sale of software to companies like Nortel, Honeywell, and General Electric. It enabled them to get a richer understanding of their customer needs. eConversations increased their web site traffic, volume of calls to sales agents, and was demonstrated at the 2001 PC Forum.

technical environment: J2EE (incl. Servlets, JDBC), Enhydra XMLC, Linux, XML/XSLT, sh, ksh, OO design, XP, Weblogic, Tomcat, DB2, Vim, CVS, Ant, shell scripts

EDUCATION

1998 - 1999 CANADIAN SECURITIES COURSE
Canadian Securities Institute; Toronto, Canada

1995 - 1999 BACHELOR OF COMMERCE; Finance, MIS
Concordia University; Montreal, Canada

TESTIMONIALS

Jordan Stolper   CEO / Co-founder at StoryDesk.com

"Tim is a gifted developer - thoughtful, strategic, and careful. We hired him to developer the StoryDesk CloudEditor. He delivered a beautiful, one-of-a-kind HTML5 content management system for iPad. I offer Tim my highest recommendation, as a colleague and a friend".

Ed Abrams   Acrobat.com Architect at Adobe

"I find Tim to be personable, creative and to have a seemingly limitless energy for trying new things. I consulted for him for a while, and we had a chance to interact on a bunch of technical features over the course of a few months. He has a great big-picture view and has the technical chops to spec, design and produce big software projects".

Stephen Kawaguchi   Front-end Engineer & UX Design Consultant; Bank of Montreal, IFL

"Tim is one of the most intelligent, forward-thinking developers I've ever worked with. He possesses a deep pool of knowledge about all things related to software and uses that to engineer top-notch solutions. The diversity he's gained from experience with so many different languages and technologies gives him great perspective on technical approaches and strategies. He is also one of the most enthusiastic and proactive colleagues I've ever had the chance to work with, and I'm sure that he's up to any challenge that comes his way".