

# William Tran

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## Objective

To create business value through the expert use of best-of-breed Java technologies.

## Technologies

### Java Technologies

- Java 5 and above – 6 years
- Spring, Hibernate – 5 years
- JSP, Velocity – 5 years
- JMS, JPA, JMX – 3 years
- EhCache – 2 years
- Maven – 2 years
- Ant – 3 years
- Liferay – 1 year

### Web Technologies

- HTML, CSS, JavaScript – 5 years
- jQuery – 3 years

### Servers and Environments

- Amazon EC2 – 5 years
- Tomcat 5 and 6 – 5 years
- Apache 2 – 3 years
- JBoss 5 – 2 years

### Databases

- MySQL 5 – 5 years
- Oracle, PostgreSQL, SQL Server – 1 year

### Protocols and Data Formats

- SOAP and XML – 5 years
- JSON – 3 years
- XPath – 2 years

### Operating systems

- Linux and shell scripting – 5 years
- Windows deployment – 2 years

### Other Languages

- PHP – 1/2 year
- Ruby on Rails – 1/2 year
- C#, VB.net – 1 year
- Python – 1 year
- VBA – 3 years
- Server Side JavaScript – 2 years

## Employment History

### Xtreme Labs Inc.

*Agile Engineer*

**Toronto, ON**

*April 2011 – Present*

- Provided Bell with 24/7 application level support for the *XL Magic* mobile web platform
- Re-architected XL Magic to overcome poor response times and stability issues caused by tight coupling with unreliable 3<sup>rd</sup> party services
- Managed a team of 10 developers in the rewrite of XL Magic, which can now provide mobile optimized experiences for Virgin Mobile, MuchMusic, MTV, BNN, and soon for Sympatico
- Built a redundant, horizontally scalable production environment on EC2 to allow XL Magic clients to upgrade at any time of the day with zero downtime
- Established a rapid development and release environment using a Hudson/Jenkins CI server, a Nexus Maven repository, JRebel, and SpringSource Tool Suite
- Designed and implemented a configuration server for the Bell Mobile TV application
- Evangelized best practices for writing Java server applications within Xtreme Labs
- Trained developers on the effective use of JSP, Spring MVC, Hibernate, JPA, and Liferay

### Zerofootprint Software Inc.

*Senior Java Engineer*

**Toronto, ON**

*Nov 2010 – April 2011*

- Evolved an underperforming carbon footprint and consumption analysis engine to a horizontally scalable grid computing infrastructure of nearly limitless capacity
- Used an event driven architecture and the concept of eventual consistency to provide real time data collection and near real-time analytics
- Implemented advanced temporal-hierarchical data structures to support highly efficient queries along any intersection of time and hierarchy dimensions
- Used Spring 3, MySQL 5, Active MQ and Tomcat 6, on Amazon EC2

### I Love Rewards Inc.

*Software Architect*

*Java Developer*

**Toronto, ON**

*July 2008 – Nov 2010*

*February 2007 – July 2008*

- Served as the lead architect of the company's flagship product since its inception in 2007; a multi-tenant SaaS employee rewards and recognition platform based on collecting and redeeming points, which generated over \$1M in monthly gross billings (Nov 2010)

## Employment History

### I Love Rewards Inc. (cont'd)

- Responsibilities included establishing architectural strategy, designing and implementing critical infrastructure, application security, internal and external systems integration, production server configuration, performance tuning and troubleshooting, tooling standards, among many others
- Continuously improves and makes time for technical debt repayment in an agile environment
- Mastered the use of Spring (Core, Security, Transactions, AOP, MVC, WebFlow, JMS), Hibernate (with JPA2), MySQL 5, ActiveMQ 5, SOAP Web Services (Axis, XFire), Tomcat 6 and Apache 2 on Amazon's Elastic Computing Cloud.
- Selected for the prestigious President's Club for outstanding results in 2009

### Honeywell Airframe Systems Canada, Inc.

Mississauga, ON

*Contract Developer / Analyst*

*July 2000 – February 2007*

- Developed process automation solutions to reduce manufacturing defects, increase on time delivery rates, and save purchasing costs
- Completed 4 to 16 month contracts with increasing responsibility and access to resources
- Developed lightweight solutions with VBA, VB6 standalone, Server Side JavaScript, Python, J2SE 5, SQL Server 2000, and .Net 1.1 (VB.Net, C#)

## Results

### *Present – Xtreme Labs Inc*

- Designed desktop browser support for Xtreme Labs' XL Magic mobile web platform, to enable the upcoming re-launch of one of Canada's most popular web sites (450 million hits / mo)
- Built a horizontally scalable mobile web portal platform using Liferay Portal, Spring, Hibernate, EhCache (replicated), Tomcat and MySQL that can serve 300 requests per second on a single m1.large EC2 instance with an average response time of 100 ms (min 20 ms, max 3.8 s)

### *2011 – Zerofootprint Software Inc.*

- Implemented an event driven architecture using Active MQ and MySQL for near-real time data collection from electrical smart meters, capable of collecting 1000s of data points per second
- Developed high performance techniques using MySQL for storing and querying data that was both time based and hierarchical (e.g. electricity consumption in 2010 by neighbourhood / city / province / country), which could query 2,000,000 node trees in under 50 ms.

### *2010 – I Love Rewards Inc.*

- Took complete ownership of our financial and supply chain integration with NetSuite
- Finalist in The Quest for Canada's Smartest IT - [www.smartest-it.ca](http://www.smartest-it.ca)
- Eliminated Tomcat restarts in development with JRebel, saving days of development time every month, and allowing developers to be more productive with fewer interruptions
- Reduced Tomcat old-gen heap consumption from 2 GB to 350 MB, which resulted in faster response times, faster GCs, and much less frequent pauses due to full system GCs
- Modified ActiveMQ 5.3 and Lingo (transparent, asynchronous method invocation over JMS with Spring) for automated dead letter handling to support a reliable event-driven architecture

### *2009*

- Turned a manual, time consuming, and error prone build and deploy process into a one line command using SVN, Ant and shell scripting, allowing us to have a process that was reliable enough to perform overnight, unattended, and frequent releases to production
- Installed NX Server (remote desktop environment) and VisualVM on our production and test servers to successfully tune our JVM and identify performance issues
- Reduced login to landing page response time from up to 3 seconds down to consistently under 0.5 seconds through query optimization and optimizing our use of Hibernate
- Reduced online reporting response times from 10% of requests > 5 seconds to 1% > 5 seconds
- Secured authentication and password management functions for 100's of clients on different domains over SSL with a single, non-wildcard certificate
- Created a SAML 1.1 SSO service provider which had a critical role in closing an A client in record time (8 days, \$500K/yr)
- Integrated the accounts receivable aspects of our product with NetSuite, a SaaS ERP system
- Integrated with SurfGold, a global rewards and fulfillment partner to service Asian customers

## Results

### *2008 – I Love Rewards Inc. (cont'd)*

- To fulfill the complex needs of large organizations, developed a flexible, high performance and fine grained role based access control system with support for hierarchical roles, permissions and organizational structures. Access checks on individual domain objects in the context of a method invocation could be performed in < 1 ms, and hundreds of thousands of objects could be checked in < 50 ms through the use of highly optimized hierarchical indices.
- Integrated with Amazon.com as a fulfillment partner to provide a better offering for our American clients.
- Created a job queuing and processing infrastructure using ActiveMQ and Lingo to move load intensive functions like bulk user operations offline for better resource management.

### *2007*

- Led the development team in the architecture and design of a multitenant employee rewards and recognition system. Individually, implemented a transaction engine for points, support for complex organizational structures, customizable rewards catalogues, and a framework for pluggable recognition modules.

### *2006 – Honeywell Airframe Systems Canada, Inc.*

- Built the historical test data import tool to automate the population of millions of environmental test results into a database, using a configurable, state based parser built on regular expressions and Java to extract test case results from hard copies in disparate formats

### *2005*

- Designed and developed a workflow monitoring and notification system using VB.Net, C#, and SQL Server 2000, resulting in a 10% reduction in repair turnaround time
- Developed an ORM in C# for automated binding of business objects to persistent data stores in both XML and SQL

### *2004*

- Designed and built a web based quality management system using Server-Side JavaScript and SQL Server 7 to ensure one-time upgrades were performed to units during routine maintenance
- Developed a code analysis and verification tool in Python for use on Server-Side JavaScript applications to identify database connection cleanup errors and variable scoping issues, which improved scalability for all of Honeywell's intranet applications

### *2003*

- Built a multi-user archive management system with VBA that integrated a barcode scanner with Excel and Windows' full text searching capabilities
- Reduced repair unit turnaround time using VBA and Excel to automatically search and print work routings at during the induction process

### *2002*

- Developed a polling mechanism to integrate VBA applications with the mainframe MRP system in a read-only fashion, and used it as a foundation for multiple workflow management and notification systems

### *2000*

- Used VBA to develop a screen scraping and input utility for terminal applications that could adapt to changes in screen layouts and used it to automate Excel report generation and data entry for the purchasing department, fully automating 1 day of work per week

## Education and Training

### **2010**

**Spring 2GX, Chicago IL**

### **2007**

**The Spring Experience, Hollywood FL**

### **2006**

**University of Toronto, St. George Campus**

Honours BSc Computer Science, Information Systems Specialist