Bill Tsay

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Senior Software Engineer/Architect
Software Development/Architecture Design

Over twenty years of rich experiences in software development, application architecture, infrastructure design, trouble shooting and project management in financial, IT, e-commerce industries and Research Institutes. The experiences are widely crossing in many areas:

- **SCADA, Manufacturing Data Analysis and Dashboard.**
- **Big Data Analytics in Hadoop, Spark, Solr platforms.**
- **Machine Learning Algorithm and Framework, System Design.**
- **OSGi Highly Modular Java Systems.**
- **Portal, CMS application and systems, IBM Websphere, JBoss & Weblogic.**
- **Trading settlement systems.**
- **Financial Information Transaction and Portal System.**
- **E-commerce high profile, transaction heavy web site system.**
- **Web services integration, security and single sign on.**
- **Business Process Workflow and Notification System.**
- **Enterprise Information Integration and Web Services System.**
- **Information Retrieval and Application Performance Monitoring System.**
- **Business to Business Messaging System.**
- **Application migration and performance monitoring.**

Key Competence

Software Development Lifecycle Management.   Enterprise and Business Model Architecture.
High Performance Team Building.   New Product Research and Architecture.
System Integration and Technical Supports.   Emerging Technologies and Solutions.

Certification and Affiliation

- *Splunk Certified Architect*
- *Appian BPM Certified Designer*
- *IBM Certified for e-business - Solution Designer*
- *IBM Certified for e-business - Solution Technologist*
- *IBM Certified Solution Developer - IBM WSAD*
- *IBM Certified Systems Expert – Administration for IBM Websphere Application Server, WCS.*
- *IBM Certified Specialist – IBM Websphere Application Server*
- *Sun Certified Programmer for the Java 2 Platform 1.4*
- *Member, IEEE*
- *Member, IEEE Computer Society.*

Education

Master Degree in Cybersecurity Program – CS, New York University, 2017
Master Degree in Physics Science, Tsinghua University, Taiwan.

Professional Experience

New York University   **New York City, NY**
                                                              2013.1 – 2017.1

NYU Project-Oriented Courses: CS9223 Big Data and CS6923 Machine Learning

Java Big Data Implementation, Hadoop, Spark, Spark Stream, Cassandra, Kafka, Financial Data Streaming.
R Machine Learning, H2O engine, SVM, k-means, ANN Deep Learning, Text Mining, Topic Modeling.
Platforms includes cloudera (QuickStart), standalone and cluster with VMs.

All the project reports and source codes are at :

https://github.com/billtsay/bigdataclass
https://github.com/billtsay/final-exam
https://github.com/billtsay/class-project
https://github.com/billtsay/project-1
https://github.com/billtsay/project-2

Graduated with GPA 3.788/4. My study crosses Computer Science and Cybersecurity Programs.

www.splunk.com   **San Francisco, CA**

Senior Software Engineer   **2011.8 – 2016.6**

Splunk is specialized in the context of monitoring large scale, distributed mission critical applications and systems. Industries use Splunk in many different ways: to isolate problems, diagnose and troubleshoot issues, to monitor performance and service levels, to connect transactions across different components of the infrastructure and to provide operational insights about the application that aids in IT and business decision-making. Many of these uses would traditionally have been categorized as "Application Performance Monitoring" except that Splunk does more than just monitor the application – it also makes the data relevant to operational decision making.

My role is to architect, develop with development team in various projects. The responsibilities include

Information Retrieval Engine in REST web service protocol design and implementation.
Java REST client API, JavaScripts(Foundation, AngularJS, NodeJS etc), UI components, ajax REST client API.
Django, Python Web Application Modulization, Architecture Design and Development.
Reside Customization Application into Java Application Servers such as WebSphere, Weblogic and Jboss
*   platforms.*
Big Data analytics, Hadoop, Hive, Solr, HBase, Cassandra with large data volume.
Business Analytics Design and Implementation.
IoT Manufacturing SCADA dashboard and KPI implementation.

www.dnb.com, D&B   **San Mateo, CA**

Contractual Architect   **2010.2 – 2011.7**

DNBi Risk Management is an easy-to-use Web-based solution that enables and view all the business information - when you want and how you want - for one set price. Flexible add-on modules to DNBi such as Online Credit Application, Account Manager and Decision Maker are also available for your convenience.

- OSGi Service Oriented Architecture – Design and Development of new service oriented architecture in all OSGi bundle forms with Apach Felix, Jboss osgi and spring DM etc blueprint containers .
- Global Decision Maker – web-based application to enable consistent, automated credit decisions across the organization, based on risk rules.
- Data Integration – cost-effectively integrate critical D&B information across diverse systems and applications, allowing faster and more precise risk decisions.
- Portfolio monitor and Risk Assessment management – A portfolio management tool that integrates customer, third part and D&B data, allowing to prioritize accounts for review and collection.

My role in this project is to architect and develop the next generation of risk management system, that is based on OSGi, SOA, web services and transactional system to provide the client and server application integration portal. The responsibilities include

- *Research and Develop the new Service oriented architecture with OSGi R4.2 and Development of OSGi services in springDM, apache felix embeded into jboss etc highly scare modular SOA systems.*
- *Technically build up the framework to support the business development team to develop the portal application, web services, ESB event driven solutions for the enterprise application.*
- *To design and architect the entire structure and architecture of risk management resided at dnb.com and work with and tutor out-source team in India to develop the business requirements.*

www.nixle.com, Social Network   **San Francisco, CA**

Contractual Architect   **2008.7 – 2009.12**

Nixle.com, a startup, is providing a free service of receiving trusted, up-to-the-minute, neighborhood information for where you live, work, visit - or for where your family and friends are located throughout the country.

- Nixle Secure Group Private Messaging application - allows agencies and organizations to use the same trusted Nixle platform for public messaging to communicate internally via private groups. Agencies/Organizations can define custom groups and use mobile phone text messages (SMS) to keep group members up-to-date with real-time messages on any mobile phone in any location where mobile phone service is available.
- Nixle's LiveWire marketing, advertising, and promotional service - is a text messaging service allowing for immediate connection between businesses and their customers. Create effective mobile advertising, promotional, and marketing campaigns with ease.

As the principle architect, my role in this project is to build up a development team, plan, research, manage and develop the highly transactional web site nixle.com and internal portal system for the nixle.com with its vendors, partners to deliver secure, reliable messages to consumers. The responsibilities include

- *Build and lead the development team to develop nixle.com at the earliest stage.*
- *Technically provide the knowledge of core java, seda architecture, ServiceMix ESB, hibernate, groovy, grails, portal, cache and spring framework to the entire development team members.*
- *To design and architect the entire structure and architecture of website nixle.com and internal portal and data access objects using hibernate services to meet the business requirements.*
- *To design, manage and architect the highly transactional system with high capability of sms and email delivery, failover and workload balanced, grid, cluster computing environment.*

Before 2008.6, Canada/US Work Profiles

www.mformation.com, Edison, New Jersey
www.overstock.com, Salt Lake City, Utah
JPMorganChase Bank, New York, Houston
Deutsche Bank, New York
CitiBank, Tampa, FL
Verizon, White Plains, NY
IBM T. J. Watson Lab., Hawthorne, NY
IBM Toronto Lab., Toronto, Canada
CIBC Bank, Toronto, Canada

Taiwan Work Profiles

Project Manager with Digital Taiwan in VLSI Factory Automation and Information System.
System Integrator with IBM Taiwan in VLSI Factory Automation and Imformation System.
Integration Manager with SunMicrosystem Taiwan.
Researcher at CSIST in defense industry.

Citizen Status

US Citizen
Canadian Maple Card Holder
Able to work in Canada and US legally.