

# TIMOTHY J FLEMING

*Architecting and implementing robust DevOps solutions.*

## Software Architect / DevOps Architect

Over 20 years IT experience as developer and architect for the enterprise, cloud and web applications using Java and Javascript technologies.

Deep experience with DevOps automation design and implementation (Xebia Labs, Mesosphere, HashiCorp, Chef, Puppet, Ansible, Docker, OpsWorks).

Senior Level Java architect and developer. Hands-on Software Developer in multiple languages (Java, Python, Ruby, Scala, Javascript, SQL), methodologies (Agile, RUP, Waterfall), toolsets (UML, OOAD, MDA, SOA, etc) and frameworks (Spring, Hibernate, AngularJS, node.js).

Experienced across the entire SDLC including requirements gathering, prototype implementation, application and system architecture, development, testing, deployment and production support.

Extensive cloud computing expertise including Amazon AWS, Hadoop, Hbase, MongoDB, and R.

Extensive knowledge of network and operating systems issues from programming to overall integration. Experienced in relevant areas as: disaster recovery, high availability, fault tolerance and multi layered security from perimeter (firewalls and proxy systems) to services.

Excellent Oral and Written Communication Skills: Organized many presentations, training courses, and team mentoring exercises. Acted as technical liaison with vendors, customers and executive level management. Experienced instructor with deep experience in both documentation and presentation to client audiences, professional peers, and management and executive levels. Expertise in industry verticals such as financial, brokerage, real estate, insurance, retail, etc.

### EXPERTISE

DevOps Architecture

SDLC Automation

Public / Private Cloud

Containerization

Virtualization

Relational Databases

NoSQL Datastores

Hands-On Developer in Java, Python, Javascript

### CERTIFICATIONS

Apache Cassandra

### EDUCATION

BS Physics  
University of Missouri  
Rolla, Missouri

MA Linguistics  
Ball State University  
Muncie, Indiana

## PROFESSIONAL EXPERIENCE

### June 2015 – Present, Independent Consultant

*DevOps Architect / Cloud Architect*

Working with various consulting firms to research, prototype and implement state of the art cloud, big data and DevOps solutions for Fortune 500 companies such as Comcast, Digital Globe, TD Ameritrade, TD Bank, Standard Insurance, Liberty Mutual, HERE, CDW, and more. Consulting services provide through Trace 3, Xentaurus, Global Infotek, and XebiaLabs.

Technologies and Tools Used:

Java	Jenkins	XL Release	Docker	Cassandra
Ruby	GitHub	XL Deploy	Chef	AWS / Azure
Python	Artifactory	Nexus	OpenShift	DCOS

### **Oct 2014 – Apr 2015, Carpathia, Sterling, VA**

*Contract Lead Developer / Architect*

Carpathia is a trusted cloud operator and leading provider of compliant cloud service and managed hosting. As Lead Developer and Architect, I designed a new product offering that extended their cloud monitoring and control to leading public clouds such as Amazon AWS, Microsoft Azure, VMWare VCloud and OpenStack. I designed and implemented cloud resident collector applications, SNMP monitors and RESTful central collection server.

See: <http://carpathia.com/services/cop>

Technologies and Tools Used:

Java 7	Hibernate	Postgresql 9.x	Spring MVC	Docker	Spring-Boot
EM7	Maven	Jenkins	Ansible	SNMP	Spring MVC

### **Jan 2008 – Jun 2014, FINRA, Rockville, MD**

*Senior Developer / Senior Architect / Technical Project Manager*

FINRA (Financial Industry Regulatory Agency) was created in July 2007 with the merger of NASD and the regulatory arm of the New York Stock Exchange. FINRA touches virtually every aspect of the securities business—from registering and educating industry participants to examining securities firms; writing rules; enforcing those rules and the federal securities laws; informing and educating the investing public; providing trade reporting and other industry utilities; and administering the largest dispute resolution forum for investors and registered firms.

Project 1: As Application Architect I designed and implemented the Variable Annuity web application. This application takes XML data feeds from industry firms, processes the information and makes it available to broker/dealers. Initial version was based on JSP/Struts while version 2 was an AJAX application based on Google Web Toolkit (GWT).

Project 2: Designed and implemented a high volume data ingestion application. This Java application included a job execution and management framework using Apache Quartz and Google Web Toolkit (GWT). The project was completed early and below budget.

Project 3: Designed and implemented a filing ingestion application. This application supports both machine-to-machine transfers as well as web user interface. Internal users manage filing workflow with a GWT web interface. Schematron was used for filing validation and rules-based business determination.

Project 4: Designed and implemented Common Data Ingest Platform. This platform consisted of 4 components. An SFTP authentication agent and file processor, a workflow-based request manager, an Xforms based forms front-end and a web services based data service API.

Project 5: Designed and developed map-reduce jobs for big data analysis using Cloudera Hadoop. Improved performance by optimizing algorithms for map-reduce. Developed supporting applications to initiate and monitor jobs based on environmental triggers.

Technologies and Tools Used:

Cloudera Hadoop	Google Web Toolkit (GWT)	Hibernate	Struts
Schematron	Oracle 11g	Linux/Windows	Java 7
Quartz	RESTlets	Eclipse	Axis2
jBPM	Spring tcServer	Spring Framework	

### **Oct 2005 – Dec 2007, Global Apparel Network Inc, New York, NY**

*VP of Technology*

Global Apparel Network is a software product company that markets both a desktop java application and a J2EE web application. These are commercial products that allow users to communicate with pictures as “visual e-mail”. The applications use advanced image manipulation, SOA and AJAX technologies. The application is used by

major retailers such as The GAP, Nordstrom and Walmart.

As VP of Technology I managed all technical aspects of the company. This includes local and offshore product management, development teams, quality assurance and production support teams.

Technologies and Tools Used:

JBoss AS	JBoss Seam	Hibernate	Apache
AJAX	EJB3	RESTlets	Linux/Windows
Java Swing	Java Advanced Imaging	MS Sql Server	MySql
Enterprise Architect	UML	Subversion	Eclipse

- Management: Built India-based teams and facilities from scratch. Managed remote development team, quality assurance team and system administration.
- Application Architecture: Using functional requirements and use cases, generated domain model and logical model in UML using OOA/OOD principles. Implemented services using EJB3 (Hibernate) on JBoss and AJAX on the browser.
- Security Architecture: Designed and implemented security service supporting all tiers. Implemented AOP interceptors for security service.
- System Architecture: Based on business SLA requirements, designed load balancing and fail-over of critical services. Designed and implemented proxy services and firewalls.
- Data Architecture: Design data model using Enterprise Architect. Implemented SQL for DDL and DML.
- Service Implementation: Implementation, unit testing and automated functional testing of security service, administration service, licensing and contract service
- Development: Created standardized development environment based on Eclipse, Maven and Subversion. Continuous integration and automated unit testing with Maestro. Implemented agile development methodology. Created portable environments for development using VMWare Virtual Server.
- Testing: Created load testing scripts using Grinder.
- Implemented Zabbix network and system monitoring tool.

#### **Aug 2005 – Oct 2005, HealthNet, Woodland Hills, CA**

##### *Lead Architect*

HealthNet is a managed health care organization with over 5 million members. As Lead Architect I lead a team of 2 architects and was tasked with architecting a new system based on J2EE technologies to replace their legacy mainframe application. The project was aborted when it was learned that the business requirements were largely undocumented making such a re-architecting impossible at the time.

- Requirements Management: Lead group of System Analysts to capture and document requirements. Used Enterprise Architect (EA) for domain and use case modeling using OOA/OOD principles.
- Application Architecture: Lead 2 architects and the development team in J2EE R&D projects

#### **Oct 2003 – Dec 2004, First American Corp, Poway, CA**

##### *Chief Architect*

First American is the country's largest real estate title company. They provide title and credit services to the largest mortgage companies in the US. These b-2-b services are provided via service oriented middleware using J2EE technologies.

Technologies and Tools Used:

Weblogic Application Server	Weblogic Process Integrator	Weblogic Portal
SOA/SOAP	Solaris	Oracle 8i Database
Rational Suite	UML	Clearcase

- Enterprise Architecture: Documented requirements using Zachman Framework.; captured using Rational RequisitePro. Used OOA to create UML domain model and business use cases model.
- Application Architecture: Defined message formats and translations using XML, XSLT and XPath. Defined Web Service API. Created UML logical models and sequence diagrams for implementation using EJB Session and Entity Beans. Created prototype systems based on ESB. Wrote SAD.
- Management: Lead a team of 10 US architects and 4 India architects. These teams in turn managed some

80 developers. Used RUP methodology

### **Nov 2001 – Oct 2003, Toyota Motor Sales, Torrance, CA**

#### *Application Architect*

Toyota Motor Sales is creating a sophisticated warranty claim system. This J2EE application relies heavily on business rules processing (Blaze) and XML. The application will support both on line and batch clients around the world. As application architect I am responsible for designing the application and managing the team of developers implementing the application.

#### Technologies And Tools Used:

Weblogic Application Server	Blaze Rules Engine	Novell LDAP	Oracle 8i Database
Rational Enterprise Suite	UML	Eclipse	Clearcase
XML/XSLT	Siteminder		

- Application Architecture: Analyzed business and system use cases using ICONIX analysis methodology. Generated UML using Rational Rose. Modeled business rules for implementation in Blaze Rules Engine. Designed Weblogic/Blaze integration. Message integration using XML/XSLT and MDB's.
- Security Architecture: Designed application and website security service using LDAP integrated with Weblogic application server and Siteminder.
- Data Architecture: Data modeling using Rational Rose. Created SQL DDL and DML.
- Management: Lead development team and analysts. Used agile (XP) development methodology

### **Jan 2000 – Nov 2001, Morgan Stanley Online, San Francisco, CA**

#### *Application Architect/VP Software Development*

Morgan Stanley Online, a division of Morgan Stanley, is responsible for implementing all customer-facing technologies including Internet, wireless, interactive voice-response, and call centers.

My team was tasked with replacing the existing cgi/Perl online application. The three main components of the application are account management, equity, mutual fund and bond trading, and research for all products. These involve multiple external integrations for real-time quotes and trade fulfillment.

#### Technologies And Tools Used:

Weblogic Application Server	Blaze Rules Engine	MQ Series Messaging	Apache
Weblogic Process Integrator	Rational Rose	Clearcase	Solaris
Sybase SQL Server	IBM DB2 Database	Interwoven CMS	

- Enterprise Architecture: Used Rational RequisitePro to capture requirements. Used OOA to create domain models and activity diagrams. Created system architecture for fault tolerance and recovery.
- Application Architecture: Designed multiple modules with service oriented API. Specified external data integrations for high availability and performance. Integrated IVR service provider.
- Management: Lead 6 architects who in turn lead individual development teams. Used agile (XP) methodologies for iterations within the RUP framework.

### **Jun 1998 – Dec 1999, ACI, Sausalito, CA**

#### *Enterprise Technologist*

ACI developed financial planning tools for some of the country's largest mutual fund companies including American Century, John Hancock, and Mass Mutual. My responsibility was to migrate ACI's cgi/Perl planning tools to Java/Servlet implementation.

#### Technologies And Tools Used:

JRun	Servlets	Perl	CVS
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- Established and implemented application architecture.
- Managed migration of tools from desktop to the Internet.
- Hands-on manager and technical lead.

## EDUCATION

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### **Ball State University, Muncie, IN**

*Master of Arts Linguistics*

### **University of Missouri – Rolla, Rolla, MO**

*Bachelor of Science – Physics*

*Minor Computer Science*