Marco A. Villalobos

email address: mvillalobos@kineteque.com

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Objective

Hands-on Software Architect and Software Engineer. Expert Java programmer. Leader within the Software Developer community. Mentor. Experienced with Python and Ruby. Ad Tech expert. Love's Ad Tech but will work in any industry. Enjoys distributed software systems, network programming, and concurrency programming.

Seeking roles as a Software Architect, or Principal Software Engineer. Works either Full-Time or Corp-to-Corp. Experienced with remote development.

Experience

Gamblit Gaming, LLC

Sr. Software Engineer / gaming   *Gaming Technology*
November 2015- Present   *Glendale, CA*

I develop software for casino gaming systems (Las Vegas). These are skill-based casino video games with touch screens, bill validators, printers, that must interface with casinos via the Slot Accounting System (SAS) protocol. My role was software architecture, hands-on development, mentoring, and technical leadership.

- Architecture and development of RESTful APIs with Java, JDK 1.8, and Spring Boot. I designed our layered-architecture, package structure, and build. Developed and mentored staff with the practice of concurrency programming, domain driven design, and the Spring Framework. These projects used services, dependency injection, transaction management with AOP, JAX-RS with Jersey, JSON serialization with Jackson, JDBC, unit testing, integration testing, Docker, Docker Compose, Flyway database migrations, PostgreSQL, and Microsoft SQL Server.
- Implemented a streaming data statistical calculator that could test for randomness with the Runs Test, and Autocorrelation Test. It accepted unlimited size datasets with any range of numbers. Input files were over 10 GB. Statistical models were designed with only academic research papers as reference.
- Implemented high-performance, low-latency TCP/IP applications with Java 8, NIO and Netty. I designed and implemented our TCP/IP application layer protocols.
- Implemented a command-line tool with Java and Git that analyzed a Maven project and checked out all its dependencies within the organization in the order that they must be built or tagged. This project used Maven Aether and JGIt libraries. This essentially was a graphing problem that required a combination of breadth first traversal and depth first traversal.
- Architecture and development of a full-stack system. Delivered complete software architecture with Attribute Driven Design methodology (ADD 3.0). From the top, UI was written with Angular 6 and Bootstrap. RESTful API was written with Python 2, Flask, and SQL Alchemy. OAuth 2 Authorization server was written with Python 2, Flask, Authlib, Open LDAP, and SQL Alchemy.

Loot Crate

Sr. Software Engineer / eCommerce   *Technology*
April 2015- November 2015   *Los Angeles, CA*

I provided the architecture to pivot from a single Ruby on Rails application that provides subscription and shipping services towards a distributed system. This includes surveying the key components in the system, accounting for performance and scalability problems, and recommending technical solutions. My role was software architecture, hands-on development, mentoring, and technical leadership.

- I developed database migration scripts to provide referential integrity and auditing functionality to a production PostgreSQL database. These migrations also fixed data anomalies.
- I developed high-performance multi-threaded ETL data-pipeline that transferred 900,000 records, persisted 7 million database records, and uploaded 3.5 million files that accounted for 73.3 GB in S3. This task used JRuby, Java threads, Java Concurrency, JDBC batch, Badger, and AWS.
- I implemented an internal Ruby GEM called "Badger" that simplified developing high-performing database batch programs. "Badger" compared to an MRI Ruby application reduced execution time from 18 hours to only 15 minutes.

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Overstock.com
Sr. Software Engineer / eCommerce   ***Consultant***
October 2012- April 2015   *South Pasadena, CA*

I worked remotely as a consultant as a Sr. Software Engineer on a variety of Service Oriented Architecture (SOA) projects. This includes developing and maintaining RESTful Web Services, batch processing systems, and web application development. Some of the more interesting tasks that I completed included the following:
- I helped our team develop custom SOA solutions, and also Mule SOA solutions. These solutions were mostly RESTful APIs that used Spring Boot, JAX-RS, and JPA.
- I developed stateless client libraries for HTTP REST, SFTP, and FTP that were used within our SOA components.
- I developed Docker containers for the purpose of integration testing.
- I developed a RESTful distributed file system with Netty and Cassandra.
- I developed high-performing data-pipelines that transferred GB order sized XML payloads and batched the information into a database. This product used Spring Boot, JAX-RS, StAX, and JDBC.

SupplyFrame Media
Lead Software Engineer / eCommerce   ***Technology***
April 2011- September 2012   *Los Angeles, CA*

I was Lead Developer of SupplyFrame Media's flagship aggregate e-commerce platform. This involved leading a small development team. Our team accomplished the following:
- Lead the integration of additional vendors into our aggregate e-commerce platform. This project used Tomcat, Struts 2, Spring, and PostgreSQL.
- Lead the development of full-text search capabilities with Lucene into our aggregate e-commerce platform.
- Lead the development of RESTful APIs with JAX-RS.
- I implemented Client Server applications and TCP/IP application layer protocols with NIO, Netty, and Protocol Buffers.

The Rubicon Project
Senior Software Engineer / Display Ad Serving   ***Technology***
November 2010-April 2011   *Los Angeles, CA*

I assisted in the technology transfer of the Fox Audience Network (FAN) Ad Server following the Rubicon Project's acquisition of FAN. I also lead the development of an "agile" framework for creating RESTful integration services from existing database queries.

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NewsCorp

Senior Java Software Engineer / Display Ad Serving	*Monetization Group / Fox Audience Network*
June 2007-October 2010	*Santa Monica, CA*

I was on a small team that developed and maintained a high-performance, optimizing display ad server that displayed at its peak 7 billion impressions per day. Highlights of my accomplishments include the following:

- I lead the development of a robust mission-critical high-performance data-pipeline responsible for aggregating all display ad impressions. Using concurrency programming and database batch programming techniques I was able to achieve approximately 2000 transactions per second.
- I assisted our team on our Ad Server (the most important and demanding component in our system) to implement 2nd Price Auction, and real-time cookie encryption / decryption routines.
- I developed the web services that allowed for the MyAds and Publisher Network Portal products to traffic and manage ad campaigns on the FAN Ad Server. These products used JAX-WS, JAXB, Spring, Hibernate, and DB2.
- I lead the development of an XML data-import process that automated the creation of display ads. Using a combination of DOM, StAX, and JDBC batch programming, I was able to process 1 GB XML files in under a minute.

Senior Software Engineer / Social Networking Applications	*Karaoke / MySpace*
October 2006-June 2007	*Beverly Hills, CA*

I maintained an MVC web application with Social Networking and Karaoke as its distinguishing features. This project used Tomcat, Struts, Spring, and MySQL. I integrated full-text search capabilities with Lucene.

Infospace   [Office Closed]

Senior Software Engineer Consultant / Mobile Content Delivery	**MoViSo**
April 2006-October 2006	*Los Angeles, CA*

I was on a medium sized team that developed a media purchasing and delivery platform for mobile phones. I implemented the user provisioning system that allowed users to share content on T-Mobile's MyFaves product. This product used Java, Servlet, Struts, and JDO.

Kaiser Permanente

Senior Web Developer Consultant	*Consultant through Robert Half Technologies*
Oct 2005-Feb 2006	*Pasadena, CA*

I maintained a web application that used Java, Servlet, Struts, and JDBC.

Oracle Corporation

Senior Principal Consultant	*Staff Consultant*
Aug 2005-Oct 2005	*El Segundo, CA*

I was on a small consulting team that performed on-site engagements. I assisted our client in refactoring to a Service Oriented Architecture.

BT

Senior J2EE Software Engineer / Consultant	*Infonet*
May 2004-July 2005	*El Segundo, CA*

I lead the adoption of open-source software and the Java Platform. I lead the development of distributed software systems that used JBoss J2EE Application Server, EJB, JSF, MySql, Linux, CVS, and ANT.

VFT, Incorporated

Marketing and Web Development	*Independent Consultant*
April 2003-October 2003	*Montebello, CA*

I implemented user-interface prototypes for an e-commerce site that sold linen products.

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Med Exec International
IT Consultant/Analyst   *Independent Consultant*
November 2002–May 2003   *Glendale, CA*

I delivered the requirements specification, with a complete set of Use Cases, functional requirements, non-functional requirements, and user-interface prototypes for a job board.

Gauss Interprise
Java Web Developer   *Magellan / Open-Text*
June 2000–October 2001   *Irvine, CA*

I lead the development of two Java Applets that were part of a complete Document Management solution. I used AWT, and socket programming.

Exist Corporation   [Company Out of Business]
Software Engineer
January 2000–June 2000   *Santa Monica, CA*

Maintained and developed an e-commerce system utilizing JSP, Servlet, and JDBC.

Sarnoff Legal Technologies
Java Developer Consultant   *Independent Consultant*
November 1999–January 2000   *Irvine, CA*

I implemented a time-tracking Java applet. I used Java, AWT, JDBC, and Microsoft SQL Server.

NexGen SI
Associate Client Server Developer   *Staff Consultant*
April 1999–August 1999   *Irvine, CA*

I developed Visual Basic prototypes.

Unisys Corporation
Software Co-op   *Staff Intern*
May 1998–April 1999   *Mission Viejo, CA*

I was an intern developing web applications with Cold Fusion.

Education	1996–1999	University of California Irvine	B.S., Information and Computer Science
	1992–1995	Pasadena City College	Associates of Arts

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Skills	Java, JEE, J2EE, EJB, JDBC, JPA, and JAAS.

Servlet, JSP, JSF, JAX-RS, and JAX-WS.

Web Services, REST, SOAP, Oauth 2, and JSON.

The Spring Framework, Spring Boot, Spring MVC, Spring Security, Inversion of Control, Dependency Injection, and AOP.

Network Programming, Socket Programming, NIO, Netty, and Protocol Buffers.

RDBMS, PostgreSQL, Oracle, DB2, Microsoft SQL Server, MySql, SQLite, H2, and SQL.

NoSQL, Phoenix, HBase, Cassandra, DynamoDB, Hadoop, Map Reduce, and Lucene.

Concurrency Programming, Thread-Safety, and Java Util Concurrent.

Docker, and Docker Compose.

Cloud Computing, Distributed Computing, and EC2.

Python, Flask, SQL Alchemy, Authlib, PyEnv, and Virtual Env.

Ruby, JRuby, and Ruby on Rails.

JavaScript, ECMAScript, Angular, TypeScript, and JQuery.

CSS, and Bootstrap

Linux, Open LDAP, Bash, Awk, and sometimes PERL.

Version Control, Git, Subversion, and CVS.

Package Management, Maven, Gradle, NPM, and Bundler.

Software Architecture, Attribute Driven Design 3.0, UML, Quality Attributes, Architecture Patterns, and Software Engineering.

Agile, Scrum, Use Cases, and Stories.

Verbal, written, and group presentations.

Affiliations	**Los Angeles Java Users' Group** *President* *May 2004-Present*	[Volunteer] *Non-Profit Organization* *Los Angeles, CA*

Software Developer community leader. I managed the Los Angeles Java User's Group since 2004. This involves organizing meetings, choosing relevant technical topics, finding presenters, assuring that we have a meeting location, hosting and moderating the meeting, promoting relationships between attendees and recruiters, and maintaining the website.

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Presentations

- Recognizing the Common Pitfalls in Java Concurrency Programming
- Improving Your Relational Database Architecture
- Delivering Quality Software with Modern Unit Testing Techniques
- Tips in Concurrency
- Persistence with JPA 2.1
- Get there Faster with JRuby and JRuby on Rails
- RESTful JSON Web Services with Jersey & Jackson
- Java Concurrency