# Marco Villalobos

email address: mvillalobos@kineteque.com

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| Objective | Produce software applications that are critical to a company's monetization efforts. More specifically, I want to fulfill a senior role [architect, technical lead] in the production of software applications.  I am also open to continuing my work as a remote developer, consultant, or full-time employee. |

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| Experience | **Gamblit Gaming, LLC** |

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

I developed software components for land-based table and cabinet regulated gaming systems. These were closed systems, with touch screens, bill validators, printers, that must interface with casinos via the Slot Accounting System (SAS) protocol.

- Implemented a streaming data statistical calculator that could compute all basic statistics, the Runs Test for Randomness, and the Autocorrelation Test for Randomness. This statistical application could work on unlimited size datasets with any range of numbers. Input files were over 10 GB gigabytes.
- Implemented high-performance, low-latency TCP/IP random number server. This server was implemented with Java, JDK 1.8, used NIO and Netty, and required me to write my own application layer protocol.
- Provided architectural guidance in the development of RESTful systems that used Java, JDK 1.8, Spring Boot, Maven, thread-safe domain objects, data-access objects, services, dependency injection, transaction management with AOP, JAX-RS with Jersey, JSON serialization with Jackson, JDBC, unit testing, integration testing, Docker, Docker Compose, PostgreSQL, and Microsoft SQL Server.
- 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 leveraged Maven Aether and JGIt libraries. This essentially was a graphing problem that required a combination of breadth first traversal and depth first traversal.
- Solved many of the concurrency problems that were required for a functional product. I also used this opportunity to mentor the staff on good concurrency practices.
- Introduced and setup the Flyway database migration tool to organize how we manage our database.

**Loot Crate**

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

Provided architectural guidance to transition 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.

- 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 extraction script that introspected 900,000 remote records and locally 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. I compared "Badger" to an MRI Ruby application that took 18 hours to complete with Active Record versus JRuby with Badger that only took 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 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 include the following:
- I helped our team develop custom SOA solutions, and also Mule SOA solutions. These solutions were mostly RESTful, and used Spring Boot, JAX-RS, and JPA.
- I developed stateless client Java libraries for HTTP REST, SFTP, and FTP. These were helpful for integration tasks 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 integration RESTful services that processed data payloads in the GB order range. It used HTTP streaming and database batching techniques to achieve a high throughput. This product leveraged Tomcat, 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 e-commerce platform. This involves leading a small development team. Our team accomplished the following:
- Our team integrated external sites into our e-commerce platform. This project leveraged Tomcat, Struts 2, Spring, and PostgreSQL.
- Our team integrated full-text search capabilities with Lucene onto our e-commerce platform.
- I converted an existing dynamically linked API into a RESTFul Web API with JAX-RS.
- I wrote client server system 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" technology for creating RESTFul integration services from 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:

- Under the guidance of the system's architect and a performance developer, I lead the implementation, and supported a robust, mission-critical high-performance extract-driven data-import process responsible for aggregating all display ad impressions.  Using concurrency programming and database batch programming techniques we were 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 cookie encryption / decryption routines.
- I developed and supported the integration-web services that allowed for the MyAds and Publisher Network Portal products to traffic and manage ad campaigns on the FAN Ad Server.
- I lead the development, with an additional team member, 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 leveraged 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 leveraged Java, Servlet, Struts, and JDO.

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

I maintained an internal web application that leveraged 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's team re-architect under 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 leveraged 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 delivered 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 leveraged AWT, and socket programming. I joined during a transitional period in which teams just started learning the Java technology stack.

**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 delivered a time-tracking Java applet. I leveraged Java, AWT, JDBC, and Microsoft SQL Server.

**NexGen SI**

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

Trained as a consultant and 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, EJB, JDBC, JPA, JSP, Servlet, JAX-RS, JAX-WS, Web Services, REST, JSON, Jersey, Jackson, JAAS, Concurrency Programming, Thread Safety. |

The Spring Framework, Spring Boot, Spring Security, and AOP.

Docker, and Docker Compose.

Hadoop, Cassandra, HBase, Map Reduce, and DynamoDB.

SQL, Oracle, DB2, MySQL, and PostgreSQL.

Cloud Computing, Distributed Computing, EC2.

Ruby, JRuby, and Ruby on Rails.

HTML5, Angular 2, JQuery, Bootstrap, and Handlebars.

Linux, bash, awk, and I occasionally write with PERL.

Git, Subversion, and CVS.

Requirements capture with Use Cases, UML modeling, and Software Engineering.

Agile, Scrum, and Stories.

Verbal, written, and group presentations.

**Affiliations**

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

I have managed the Los Angeles Java User's Group since 2004. This involves 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.

**Presentations**

- 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