

# Daniel Valencia Backhoff, Software Engineer

## Professional Summary

I have over 10 years of experience as a software engineer and technical lead across a diverse set of projects that span from greenfield development to big complex integration projects with startups and enterprises in the fields of eCommerce, media, real estate, and AEC.

I am a generalist that enjoys a good challenge. My strength lies on my breadth of experience: backend development, UI, mobile app development, infrastructure engineering, QA, performance/load testing, and people management. I have strong expertise in Java based web application development and I'm also proficient in other languages and platforms such as Javascript, Go, Ruby on Rails, Python and iOS.

I treat software development as a craft, and I like my code well tested. I know that test coverage is important, but 100% coverage is impractical. I've done TDD and pair programming enough to understand its value, but I'm also pragmatic and understand that prototyping sometimes requires different approaches.

Collaboration is very important to me: I love a good old whiteboarding session with fellow teammates and I enjoy mentoring fellow engineers.

## ***Senior Software Engineer***, HELIX RE Inc, San Francisco, CA (February 2018 - current)

As a founding engineer for HELIX, I've had the opportunity to design and build our cloud platform from scratch. On my day to day at HELIX, I work closely with product, UX, frontend, backend and infrastructure engineers to build the features that comprise the HELIX platform.

Some of my main accomplishments include:

- Establish key architectural decisions for the HELIX platform.
- Designed and implemented APIs for photo tour creation, point cloud management, job scheduling and orchestration, and file uploads of any size.
- Implemented authentication/authorization mechanism for the HELIX platform.
- Build infrastructure iteratively using infrastructure as code principles with Terraform and Helm charts.
- Managed a team of 4 engineers distributed globally in London, San Mateo and Guadalajara.
- Created offshore entity for HELIX in Guadalajara, Mexico.

Technologies used:

- For our Microservices: Java, Spring Boot, Gradle.
- For our Infrastructure: Terraform, Helm Charts, Vault.
- Google Cloud Platform: Datastore, Cloud SQL, Pub/Sub, Kubernetes Engine, Cloud Storage.

## ***Senior Software Engineer***, Flux Data Inc, San Francisco, CA (December 2017 - February 2018)

As a Senior Software Engineer at Flux I was responsible of maintaining and building new features for the Flux platform. Some of my accomplishments include:

- Built a scalable file datastore by repurposing an existing JSON blob store to support any content type. One of main constraints was that existing APIs and plugins for the Flux ecosystem should continue to work without any change of functionality.
- Main owner of the Flux legacy platform built with Golang.

Technologies used: Golang, MySQL, Google Cloud Storage.

## ***VP of Engineering***, Tacit Knowledge Latin America., Guadalajara, México (October 2015 - November 2017)

As a VP of Engineering for Tacit Knowledge Latin America, I'm responsible for the engineering excellence and success of our consulting projects. I'm also responsible for the growth of our engineering staff. Besides this I'm also involved in day to day consulting work. Some of my main accomplishments during my tenure as VP include:

- Worked closely with the CTO and directors to define our corporate strategy.
- Work with the leads of the different teams to solve engineering and people related issues.
- Re-engage employee collaboration and knowledge-sharing by implementing weekly lunch and learn sessions.
- Led the implementation of a company wide blog.
- Improved our local community presence by co-organizing the local Java User Group meetup.
- Participated in multiple speaking engagements in the local JUG community and the eCommerce community.

## **Project X, Major Retailer**

- Consolidation of multiple legacy loyalty programs into a single unified one.
- Tech led design and implementation for the following functionality:
  - Front-end architecture using ReactJS, React Router and RequireJS.
  - Loyalty point redemption during checkout process.
  - CSV report generation for returns and partial shipments.

## **Returns Plus, Newgistics**

- Implemented backend services using Spring Boot.
- Implemented React components for complex forms.
- Tech stack: Spring Boot, Hystrix, ReactJS, Redux, Babel, MySQL.

## ***Senior Software Engineer***, Tacit Knowledge Inc., San Francisco, CA (2011 - 2015)

### **Simpson Strong-Tie (SST) PIM/WCMS**

- Successful implementation of PIM and WCMS using SAP hybris platform.
- SST's complex product model included over 300 unique attributes and over 15,000 SKUs.
- Designed and implemented custom bulk product import mechanism.
- Integrations with the following 3rd party systems:
  - Okta SSO.
  - Bespoke PLM.

- Widen DAM.

### **Target, iPad App Redesign**

- Tech lead for Target iPad app redesign.
- App was launched on time and resulted in 3x conversion rates and 2x revenue during Black Friday (YOY).
- Built features including: new popover based categories navigation, services menu, category landing pages, weekly ad grid, and feature toggles.
- Implemented the base framework for UI testing using Appium with Ruby and RSpec.

### **Audi (via AKQA), Progressive Retail**

- Tech lead and key contributor for the Audi Sales Assist hybrid iOS application, for Audi USA dealerships.
- Finished project on date and under budget, with praise from both the client and the end users.
- Tech stack included iOS and Adobe AEM as a backend.

### **Nike, Library Project**

- Developed and executed performance testing strategy for Nike's Custom DAM solution.
- Wrote JCR-Mock open source framework (<https://github.com/tacitknowledge/jcr-mock>).
- Used Vagrant and Chef to setup development environments.
- CI and build process setup using Jenkins and Maven.

*Software Engineer*, Tacit Knowledge Inc, Guadalajara, México (2008 - 2011)

### **Navigenics, Flexible Billing Project**

- Led architecture design for flexible billing enhancements to Navigenics existing ecommerce platform.
- Guidance and mentoring to distributed team across our offices in Mexico, Moldova and the US.
- Technologies used: Apache Wicket, Google Guice, Hibernate, Spring, Maven, MySQL 5.1.

### **HEB, Click and Brick**

- Implementation of ecommerce backend services for HEB's website.
- Implemented communication with POS systems via JMS Message Bus.
- Implementation of ATG content personalization (via content targeters).
- Technologies used: ATG, Tibco message bus.

### **Converse, Site Refresh**

- Implemented backend services for the redesign of converse.com.
- Designed and implemented APIs for faceted navigation and search using Endeca search engine on top of existing .NET platform.
- Implemented new content cartridges using Endeca's PageBuilder tool.
- Provided technical guidance and mentoring for team developers.
- Technologies used: Endeca, C#, .NET MVC 2, NHibernate, T-SQL, Slideshow Pro.

## **Williams-Sonoma Inc., WCM**

- Designed and implemented back-end solution for WSI's brands, using Day's CQ5 CMS.
- Development of workflow components and JCR Listeners in CQ5.
- Development of advanced CQ5 components like bulk editor for operating on multiple skus.
- Wrote content migration scripts.
- Technologies used: CQ5, OSGi, JCR, ExtJS.

## **Kodak Gallery, Slideshow**

- Developed Kodak Gallery's Slideshow using Adobe Flex for the frontend and Java for the backend services.
- Created backend services using Webwork framework.
- Technologies used: J2EE, Java Webwork, Pico container for DI, Adobe Flex, Cairngorm.

*Software Engineer*, Softtek, Aguascalientes, México (2007 - 2008)

## **General Electric, Site Builder 2 CMS**

- Developed *Site Builder 2* internal CMS web application for General Electric.
- Fronted built using Adobe Flex 3.
- Wrote backend XML web services using Java.

*Software Engineer, QA Engineer*, IBM, México (2006 - 2007)

## **AS400 Commands Development and Maintenance**

- Maintenance owner for AS400 commands: RTVDSKINF, PRTDSKINF, RTVDIRINF, PRTDIRINF.
- Fixed bugs and implemented new features, using a combination of the following languages: C++, CL, SQL, PLMI.

## **Open Source**

I was the main author and maintainer for the [JCR-Mock](#) library for mocking JCR compliant repositories.

## **External Projects**

- Burning Man 2013 "Hands" Art Installation
  - Designed and build electronics using Arduino prototyping platform and individually addressable LEDs.
  - Implemented system to communicate Arduino microcontrollers with iOS devices using RedBear Labs' BLE Shield.
  - Wrote iOS application to interface with LEDs by means of sending commands via Bluetooth.
  - Wrote iOS custom drawing UI using Core Graphics library to interface with LEDs via Bluetooth (<https://vimeo.com/72212981>).
- Maquinet Cash Monitor

- Cash monitor for internet kiosks, comprised of two components: a daemon which runs in the kiosk (written in Java) and a web application (written in Ruby on Rails).
- Responsive web site with dashboard with graphs built with D3.js (nvd3).
- Created Vagrant setup using chef to configure and provision both development and production environments.
- Kiosk authentication to server using SSL client certs.

## Education & Training

- Bachelors degree in Electronic Engineering from ITESO (Western Institute of Technology and Higher Education) in Guadalajara, México.
- Sun Certified Java Programmer (SCJP)
- Proficient in the following technologies:
  - Java, Spring, Javascript, Ruby (Rails), Python, Go, Bash, Objective-C.
  - Google Cloud Platform: Datastore, PubSub, GKE, GCS, Firebase.
  - Kubernetes, Helm
  - Linux, Mac OS X, Windows, iOS
  - SQL Server, MySQL, PostgreSQL
  - Adobe AEM (CQ5), Endeca, ATG
  - Frontend: React, JQuery, D3.js, Ext JS
  - Terraform, Chef, Vagrant, Jenkins
  - Git, SVN