

Matt Whipple

Software Engineer

Summary

I am a driven autodidact with a track record of leading & contributing to solutions across a variety of domains throughout the software development lifecycle.

Experience

2019–present **Principal Software Engineer, Robin.**

- Designed and implemented end-to-end tests for an ETL process *Jest Docker Jenkins*
- Established practices and tooling to design and implement a dimensionally modeled data warehouse *dbt Jupyter AWS SageMaker Pandas Hypothesis AWS Redshift*
- Initiated technical design for new analytics front-end *React CubeJS TypeScript*
- Contributed to initial rollout of federated GraphQL gateway *Apollo TypeORM Kubernetes*
- Extended SCIM API to support enterprise user attributes *PHP MySQL*
- Migrated analytics data store from Elasticsearch to PostgreSQL *Go AWS Aurora*

2015–2019 **Principal Software Engineer, Brightcove.**

- Led the team owning the video metadata REST API used to coordinate system interactions: requiring highly available handling of ≈ 2500 requests/second *Kotlin Groovy MongoDB*
- Designed integration of data from an acquired system into a consolidated data store *Go Kafka Kubernetes AWS MySQL MongoDB OpenAPI*
- Provided the initial solution & guidance for coordination of data among internal services *SNS SQS Lambda DynamoDB*
- Enabled new search functionality while reducing development costs through improvements to the syntax, codebase & result relevancy *Elasticsearch Solr Lucene ANTLR*
- Diagnosed a scaling issue which threatened the broadcast of an event to millions of users *AWS ELB (Classic) Apache Tomcat netstat*
- Refined practices & tooling to support infrastructure as code, operations, & observability providing smoother & more controlled provisioning and management of resources *Terraform Datadog Sumologic AWS*
- Facilitated organization-wide adoption of documentation standards & tooling
- Designed & led development of an API gateway used for customer facing APIs which empowered each development team to configure and expose their service while maintaining a baseline of consistent functionality *nginx OpenAPI Kubernetes C AWS Kotlin*
- Led a team to update authorization services *OAuth2 Clojure Kotlin Cassandra Docker*
- Developed inter-team solutions for a variety of use cases regarding building, releasing & deploying software *Make Docker Bash TeamCity Gradle Kubernetes Git*
- Designed & developed a service to manage inter-customer relationships & coordinate related changes *Kotlin DynamoDB ReactiveX AWS*
- Configured a deployment environment and tooling for containerized applications *ECS Terraform TeamCity AWS Lambda Datadog SumoLogic CoreOS*
- Designed workflows to preserve data consistency across resources & systems
- Removed a cause of spikes in database locks & resulting latency by splitting large transactions to use an asynchronous bottom half *Oracle SQS Hibernate*
- Established testing strategies which ensured coverage while minimizing overhead *Spock Spek Brine RSpec JUnit BATS Dredd*
- Improved traceability & resiliency across threads/processes & services by establishing common patterns for integration points *Java Logback*

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2011–2015 **Application Developer, Harvard Business Publishing.**

- Automated build & deployment processes to increase reliability, repeatability, & baseline coding standards *Gradle Jenkins Sonar Cargo Liquibase Spock Jasmine*
- Established technologies & best practices used throughout development team *Spring JPA AngularJS Bootstrap Jackson/REST*
- Fostered sharing of technical knowledge throughout the organization by launching & coordinating weekly brown bag lunches with a variety of topics and presenters
- Lowered the development overhead of exporting application data by introducing a PDF rendering service with a visual designer and REST API *BIRT*
- Improved scalability by increasing statelessness & identifying logic that was leading to quadratic growth of memory & bandwidth when only linear was necessary
- Introduced federated authentication while strengthening & consolidating security configuration *Spring Security Jasig/Apereo CAS PingFederate(SAML)*
- Replaced an operational data based reporting system which suffered from performance issues & tangling with a processed data warehouse *Spring Integration Spring Batch Oracle*
- Leveraged the reporting system above to provide realtime data sharing across applications with minimal changes to the applications themselves
- Reduced development time associated with an internal management application by constructing UI elements based on automatically exposed metadata *Spring Data REST JPA AngularJS*
- Designed a Two Step View-style strategy for managing logically significant content which allowed content entry, the content used, & the logical wiring to each evolve and improve independently *Alfresco XSD/XSLT FreeMarker Google Closure Templates*
- Integrated media into applications while coordinating & establishing internal standards *Kaltura Flash jQuery HTML5 Video*

2002–2012 **Freelance Development & Consulting.**

- Developed a basic CRM style application for tracking of prospects across a sales team *Google Web Toolkit Google App Engine*
- Established a packaging & installation process to allow provided database updates to be safely & easily applied by the client's IT staff *MS Access Nullsoft Scriptable Install System VBScript*
- Created new dynamic Web sites & enhanced existing Web sites to support online payment processing, user management, & domain specific logic *PHP Zend Framework WordPress CodeIgnitor Python Django Pyramid Perl JavaScript jQuery*
- Integrated Google Maps into Web sites with features such as geolocation, nearby points of interest, & directions to the nearest out of possible destinations
- Synchronized Web site content with office software calendars *Google Calendar API*
- Implemented a system inspired by Apache Cocoon & Apache Sling to allow source documents to be rendered for multiple channels such as Web, print, & feeds *PHP REST XML XSLT XSL-FO*
- Designed a sales tracking & reporting application *Visual Basic C++ wxWidgets*

Selected Open Source Contributions

brine	A Cucumber based DSL for testing REST APIs https://www.github.com/mwhipple/brine
buildsrc	Scripts to assist with build-time software concerns https://www.github.com/mwhipple/buildsrc
nginx-build-module	Build tooling to support compilation of nginx modules independently of nginx https://github.com/mwhipple/nginx-build-module