

# Deyon Washington

POLYGLOT SENIOR SOFTWARE ENGINEER, DEVOPS, SRE



<https://git.io/Jk3dq>



[linkedin.com/in/wilmoore](https://www.linkedin.com/in/wilmoore)



[winnersonly@realpolyglot.com](mailto:winnersonly@realpolyglot.com)

Hi, I'm Deyon Washington. Formerly Wil Moore III (WM3). I am a collaborative cloud architect and software engineer. I think cloud and automation first. I employ a spike-test-iterate approach as well as README-driven development.

I work best on teams that are in need of a team player with experience refactoring all sizes of codebase, adding test automation, working with many different protocols such as HTTP APIs, SSH, monitoring, logging, debugging hard to debug issues, working with full text search engines, and bootstrapping greenfield products.

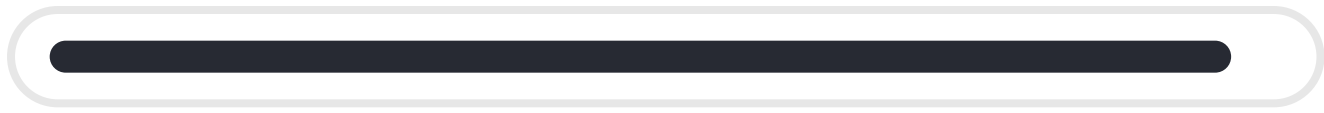
## PROGRAMMING LANGUAGES

Languages I've shipped to production, refactored to another language, authored an open-source library or framework for.

### JAVASCRIPT (V8/NODE.JS, BROWSER/DOM)



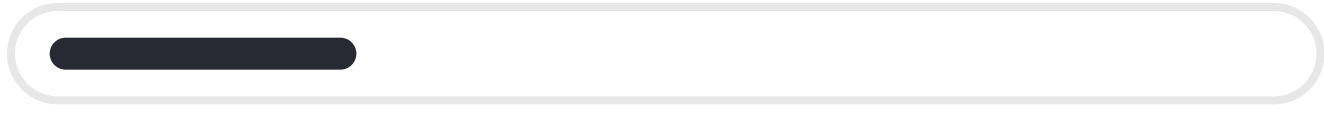
### JS COMPILED (TYPESCRIPT, BABEL, COFFEESCRIPT)



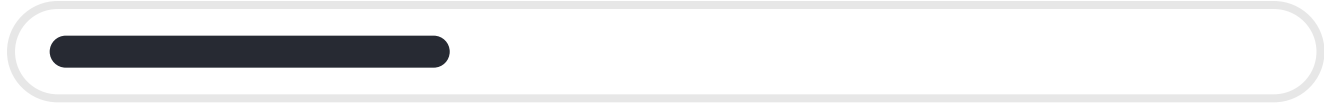
### PYTHON



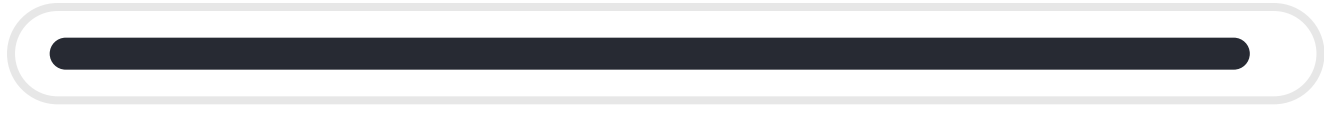
### RUST \*



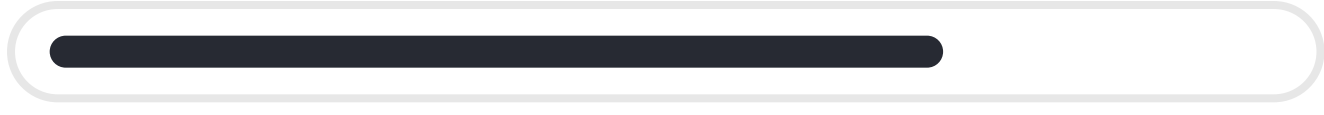
### ERLANG / ELIXIR



### PHP



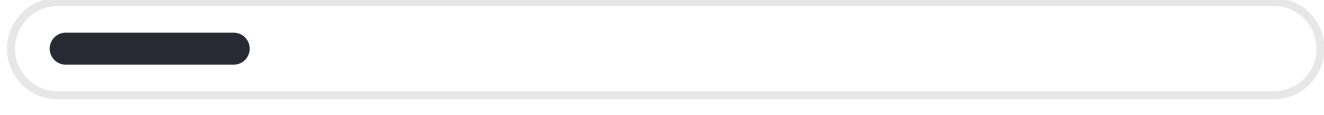
### RUBY



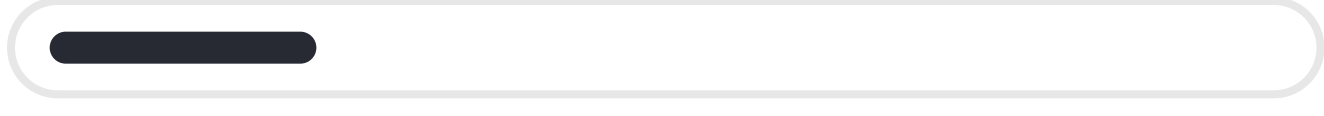
### KOTLIN \*



### GO \*



### JAVA \*



### REGEX, AWK, SED



### SQL (DDL/DQL/DML, SPROCS, TRIGGERS, VIEWS)



### SHELL SCRIPTING (SH, BASH, ZSH, FISH)



### MARKUP / STYLE (HTML/5, CSS/3, SASS, LESS, JSX)



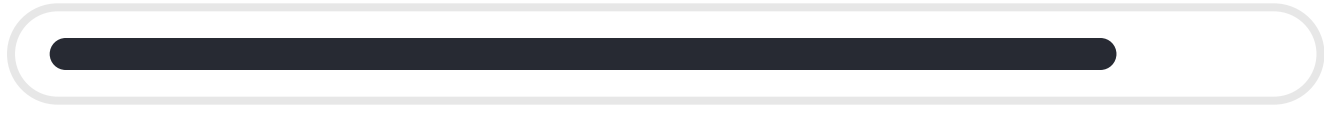
## DATABASES

Databases I've deployed and/or managed in production scenarios, or I am actively learning.

### RDBMS (POSTGRESQL, MYSQL, SQL SERVER, ORACLE)



### NOSQL (DYNAMODB, REDIS, MONGODB)



### GRAPH (NEO4J) \*



### SEARCH (ELASTICSEARCH)



## WORK EXPERIENCE

*My contract and direct hire experiences with detailed depictions of notable projects I've delivered and in some cases, the reasons behind the tech decisions.*

### Senior devOps Engineer

(CONTRACT) APR 2019 - MAY 2020

MapQuest (Verizon Location Services) - Denver, CO (40% REMOTE)

I work with data scientists, data engineers, and software engineers to automate and secure instance provisioning, data ingestion pipelines and machine learning workloads on cloud infrastructure.

Setup secure (SFTP) file exchange between data science team and third party data vendors.

CloudFormation, Ansible, Packer, and Jenkins to automate infrastructure provisioning for data science related workloads. #IAC

Replaced data science manual data pipeline with a state machine (AWS Step Functions) based pipeline including integration with AWS Lambda and AWS SSM. #ETL

Kubernetes (K8s) documentation, training, and configuration.

RDS PostgreSQL to Aurora migration. #DATABASE #SRE

Wrote a guide and hosted a primer on Provisioning GitLab in AWS. #TRAINING, #MENTORING, #GITLAB

### Senior Full-Stack Software Engineer, devOps, SRE

(CONTRACT) APR 2018 - FEB 2019

Nordstrom - Denver, CO (40% REMOTE)

Designed and implemented a near real-time messaging system with message fanout arriving via SSE. SSE (EventSource) was chosen over Websockets as my experiments and research revealed that SSE is superior in simplicity of debugging, testing, and deployment over Websockets, especially when client-to-API two-way messaging is not needed. Deployment is automated via Terraform and CloudFormation. The RESTful Swagger API (OpenAPI) written in YAML format is fronted by AWS API Gateway and proxies to AWS Lambda which persists messages to DynamoDB for long-term storage, which subsequently emits an event to a DynamoDB Stream and is picked up by an AWS Lambda function which produces to a Kafka topic. The Kafka topic is watched by a Node.js worker process and eventually fanned out to clients via SSE. #APIDESIGN, #BACKEND, #DEVOPS

Designed and implemented an Elasticsearch schema and cluster for a search/filtering strategy which replaced an existing Redis cluster which was previously merging results in-flight which was less than efficient and not very flexible in terms of agility or surviving change. The Elasticsearch cluster was deployed in AWS on EC2 instances. I crafted and documented several Elasticsearch queries per the team's requirements as well as delivered performance metrics via Artillery-based load testing. Integrated a simple Elasticsearch HTTP client along with the queries into an existing Node.js/TypeScript API (not originally maintained by me or my main team – helped another team out with this implementation). #SEARCH

Contributed various production features and enhancements to a Node.js Apollo GraphQL API deployed to AWS ElasticBeanstalk fronted by an Nginx load balancer in a VPC. I increased response throughput by +3x (at least) by way of adding database indices and pagination in hot portions of the source. The performance enhancement was verified with pre and post load testing with Artillery. Wrote custom express middleware as a provider for mocking the calls to the Node.js GraphQL API for Cypress.io testing a React front-end application. #DB, #SCHEMA, #DEVOPS, #BACKEND, #AWS

Authored sections of a Docker/Kubernetes deployment tutorial. Authored an incident response guide: a guide for on-call SREs which included examples of previous incident responses along with screenshots. Built dashboards, monitors and alerts in Datadog and Kibana, with integration to PagerDuty and automated with terraform. #DOCUMENTATION, #DEVOPS, #SRE

### Senior Full-Stack Software Engineer

(CONTRACT) OCT 2017 - MAR 2018

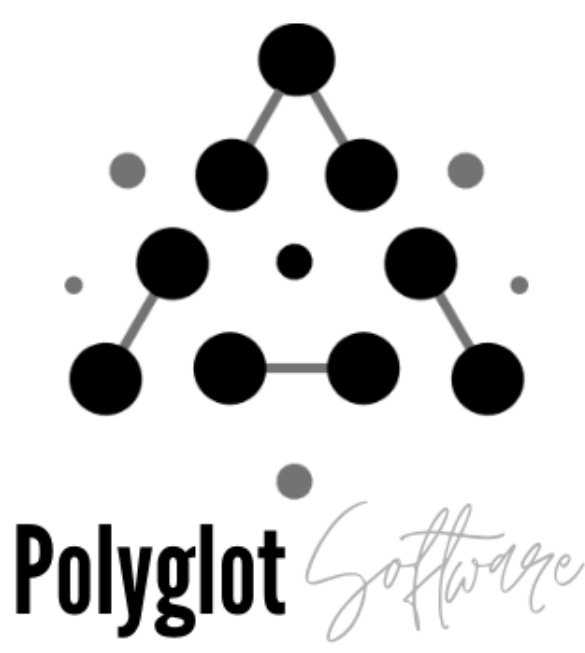
Charter Communications - Greenwood Village, CO

Designed and implemented a Node.js API with the IBM/StrongLoop Loopback API framework. API was consumed by a Vue.js single-page-application. Developed custom Loopback middleware and mixins for uploading and persisting attachments in base64 format. #API, #ARCHITECTURE

Using raw SQL DDL, designed and created MySQL database schemas to support new features and enhancements in the API. #SQL, #DDL, #MYSQL

Authored a new developer onboarding guide which covered getting started with contributing to the project, getting around the company's campus, and how to setup the VPN. #DOCUMENTATION





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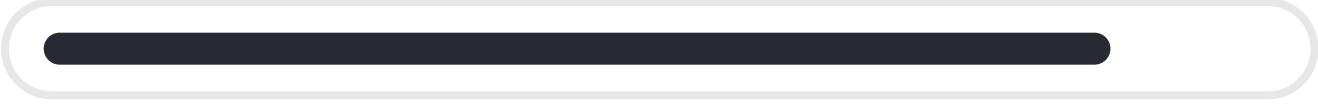
[winnersonly@realpolyglot.com](mailto:winnersonly@realpolyglot.com)

*In software, if you ask the right questions and solve the right problems, you'll be rewarded with not only a working solution but also an easily testable solution which can and should always be automated.*

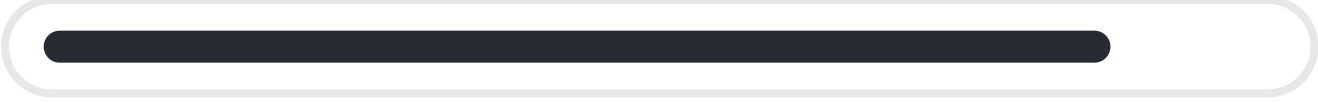
## CLOUD TECHNOLOGIES

Technologies that I've worked with in the cloud from the perspective of architecture as well as implementation.

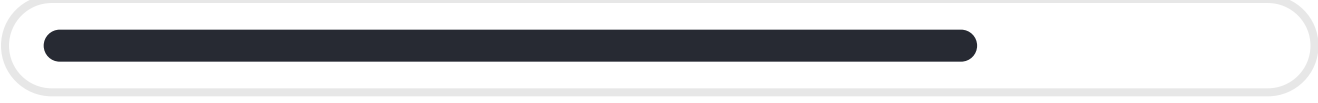
COMPUTE (AWS EC2/ELASTICBEANSTALK, HEROKU)



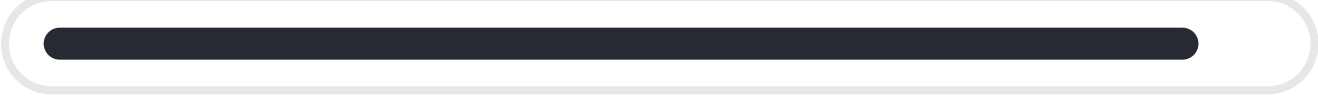
FUNCTIONS (AWS LAMBDA, SERVERLESS FRAMEWORK)



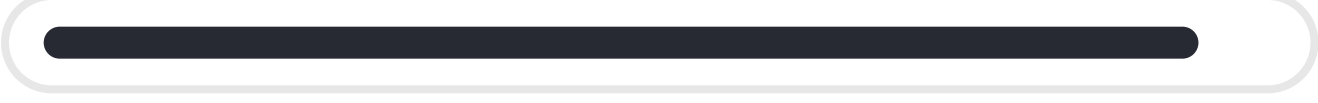
NOSQL (AWS DYNAMODB, ELASTICACHE)



RDBMS (AWS RDS POSTGRESQL & MYSQL)



STORAGE (AWS S3, RACKSPACE CLOUD FILES)



QUEUE (AWS SQS, RABBITMQ)



MESSAGING (AWS SNS)



WORKFLOW (AWS STEP FUNCTIONS)



IAC (ANSIBLE, CLOUDFORMATION, PACKER)



LOAD BALANCING (AWS ELB)



DNS (AWS ROUTE 53)



CDN (AWS CLOUDFRONT)



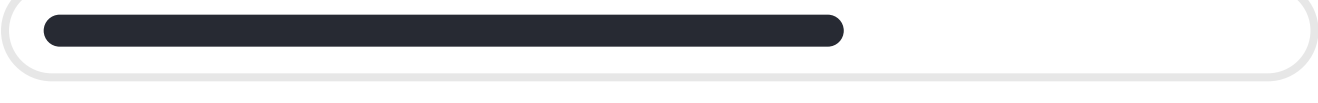
MONITORING (AWS CLOUDWATCH, DATADOG, KIBANA)



STREAM (AWS KINESIS, KAFKA)



NETWORK (AWS VPC, SECURITY GROUPS)



## WEB SERVICES

Web service (or micro-service) technologies in which I've implemented the producing side (the service itself) and/or a consuming client.

REST & RESOURCE-BASED SERVICES (OPENAPI/SWAGGER)



GRAPHQL (APOLLO-BASED & VANILLA NO-FRAMEWORK)



SOAP (CLIENTS)



## WORK EXPERIENCE

My contract and direct hire experiences with detailed depictions of notable projects I've delivered and in some cases, the reasons behind the tech decisions.

**Senior Full-Stack Software Engineer**  
Shutterstock - Denver, CO (80% REMOTE)

(CONTRACT) FEB 2016 - SEP 2017

[API ARCHITECTURE + IMPLEMENTATION, DB SCHEMA DESIGN, DB TUNING] Maintained and refactored an e-commerce **Node.js API** on top of the **express** framework backed by a **MySQL** database using **test-driven development (TDD)**. Implemented a **currency exchange API** with **Ruby** and the **Sinatra** framework backed by a MySQL database using test-driven development (**TDD**).

Contributed to **Node.js orchestration APIs** and built JavaScript **API clients** using test-driven development (**TDD**), including **npm packaging** and artifact release into a **private npm registry**. Evolved the **schema** of a MySQL database through features and enhancements through **DDL** and **DML SQL change scripts**. Introduced a **message queuing** strategy through use of the **RabbitMQ** message broker. Authored design docs, developer guides, and **architecture diagrams** as well as facilitated architecture reviews.

**Senior Full-Stack Software Engineer**  
Aetna (formerly iTriage) - Denver, CO (80% REMOTE)

(CONTRACT) MAY 2015 - FEB 2016

[API, BACKEND, DEVOPS] Implemented and deployed **Swagger APIs with Node.js, Hapi, and Docker**. Contributed to **analytics client libraries** in **JavaScript** and **Objective-C**. Contributed to a **Ruby/Sinatra** RESTful API. Contributed to an analytics platform built on top of **AWS Redshift**. StatsD instrumentation, e2e testing with WebdriverIO/Selenium and **Elasticsearch** R&D.

[DEVELOPER TOOLS] Built reusable project **boilerplates** for **scaffolding** backend **APIs** including documentation with consideration for developer experience (**DX**).

[FRONT-END] Built a secure message center as an **AngularJS** single-page-application (**SPA**) so users could login to view sensitive messages from their health provider in a modern user interface.

**Senior Full-Stack Software Engineer**  
Welltok - Denver, CO

(CONTRACT) AUG 2014 - MAY 2015

[API ARCHITECTURE + IMPLEMENTATION, BACKEND, DEVOPS] Designed and implemented Several micro-service APIs with Node.js and Express which powered the core platform for CafeWell Concierge. Concierge which was comprised of a native mobile application for health care benefits recipients and a web application for administration. APIs were deployed via **Docker** to **AWS ElasticBeanstalk** with some assets being deployed to **AWS S3** and ditributed through **AWS CloudFront**. The administration dashboard was written in **Ruby/Rails** and the **Rails Admin** package with deployment to **AWS ElasticBeanstalk** with **Docker**.

[NLP / AUTO-COMPLETE] Utilized **Elasticsearch's NLP capability** to expose a **Node.js RESTful API** for auto-complete with the **Koa** HTTP library. The **auto-complete** service was consumed by the Concierge mobile application.

[EXTERNAL SERVICE API INTEGRATIONS] As Concierge was meant to be a "cognitive" application, there was some integration with IBM Watson (the cognitive computing engine that that won Jeopardy).

Designed and implemented a **RESTful API** using the **Node.js Koa framework** with integration with the **Active.com API** ([http://developer.active.com/docs/read/v2\\_Activity\\_API\\_Search](http://developer.active.com/docs/read/v2_Activity_API_Search)). Packaged as a **Node.js module**, **Open-sourced the code**, and published to the **npm registry** (<https://www.npmjs.com/package/active-activity-search>).

[ETL] Migrated a legacy Python **ETL** project to **data transformations** powered by **Node.js** streams. **Packaged the core helpers as a Node.js module**, **Open-sourced the code**, and **published to the npm registry** (<https://www.npmjs.com/package/text-pipe>).

**Senior Front-End Software Engineer**  
Time Warner Cable - Broomfield, CO

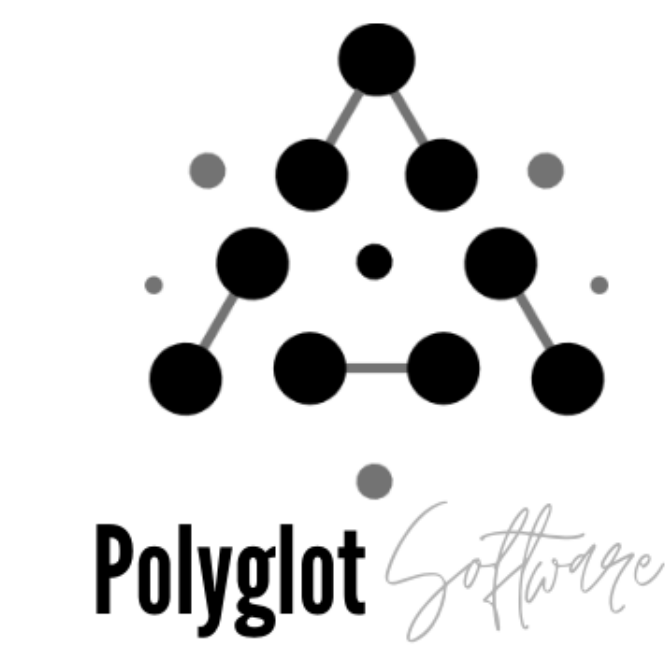
(CONTRACT) AUG 2012 - JUL 2014

Built an **HTML5 single-page-application (SPA)** and **HLS streaming video player** with custom scrubbing features. This system was targeting a **whole-home IP TV** (cable set-top box) system targeting millions of customer homes. Utilized **test-driven-development (TDD)** to implement and deliver features, bug-fixes, enhancements, and performance tuning.

Automated testing w/ **Mocha, Jasmine, Sinon, Chai**, and **PhantomJS**. Build automation with **GNUMake** and **CI/CD** with **Jenkins**. **IaC** via **Puppet**. **Node.js** for utility scripting, testing, and backend service stubbing.

Designed & Developed various HTTP API clients using **jQuery AJAX, Superagent, Promises**, higher-order functions, and "README"-driven development. API clients for retrieving and playing HLS streams as well as clients for retrieving emergency (**EAS**) notifications and application updates. Originally utilized **WebSockets** which were switched to **Server Sent Events, Mocha, Grunt, Gulp**, and **GNUMake**.





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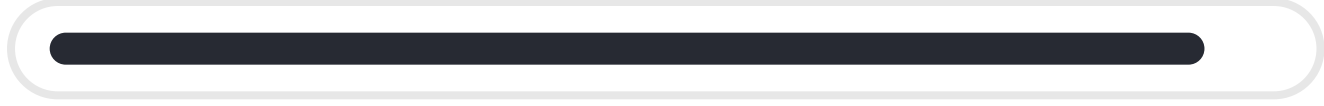
[winnersonly@realpolyglot.com](mailto:winnersonly@realpolyglot.com)

*The absolute best Person to have on your team (long term) is the person that doesn't care if you fire them, will quit the moment things don't sit right and there are no answers or nonsensical answers given to legitimate questions, and is genuinely in love with and passionate about the craft.*

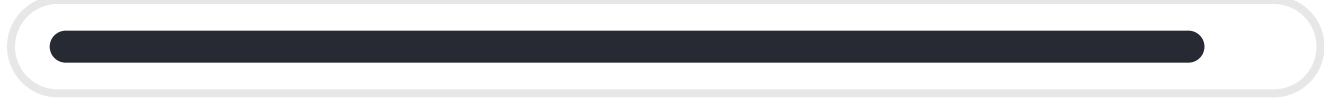
## TEST FRAMEWORKS

Automated test frameworks that I have used and feel comfortable writing new or modifying existing test cases.

JS (TAPE, MOCHA, JASMINE, TESTEM, KARMA, JEST)



RUBY (MINITEST, RSPEC)



PHP (PHPUNIT)



## API FRAMEWORKS

API libraries and frameworks that I've worked with.

NODE.JS (EXPRESS, KOA, FASTIFY, CONNECT, HAPI)



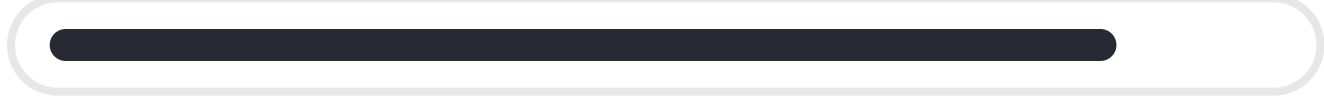
NODE.JS (APOLLO GRAPHQL, STRONGLOOP LOOPBACK)



NODE.JS (NODE STANDARD LIBRARY HTTP/HTTPS)



RUBY (SINATRA)



## WEB & MOBILE FRAMEWORKS

API libraries and frameworks that I've worked with.

REACT, REACT NATIVE



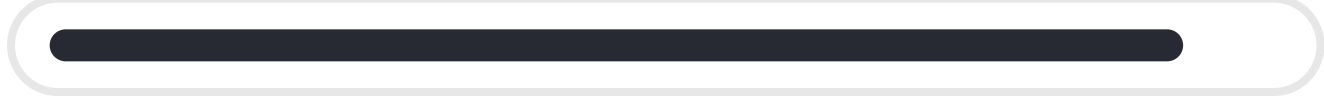
VUEJS



ANGULAR



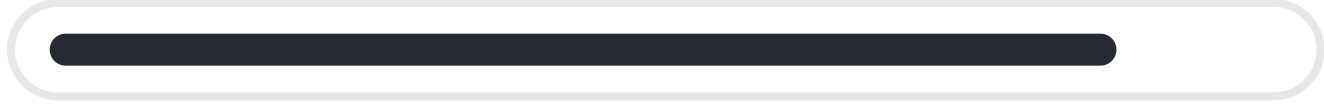
BACKBONE



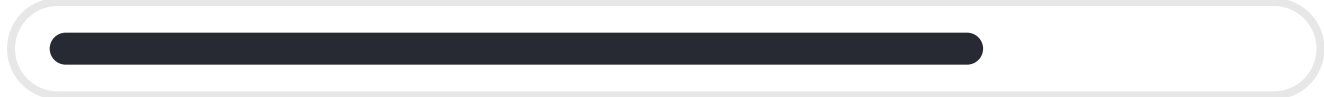
## CI/CD

Continuous Integration and continuous deployment systems that I've used, setup, and/or maintained.

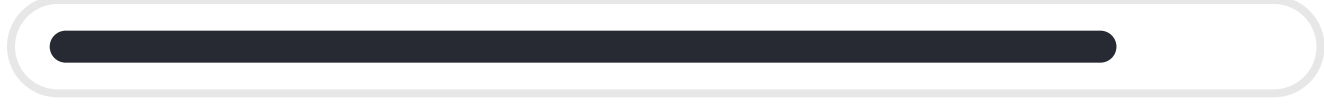
JENKINS



GITLAB CI



SEMAPHORE, CIRCLE, TRAVIS



## WORK EXPERIENCE

My contract and direct hire experiences with detailed depictions of notable projects I've delivered and in some cases, the reasons behind the tech decisions.

### Senior Full-Stack Software Engineer

\* DEC 2011 - JUL 2012

Net-Results - Golden, CO

[FRONT-END, BACK-END, UI/UIX, DEVOPS] UI/UX design and implementation for a multi-tenant browser-based **single-page-application (SPA)** for a customer **cloud file management** interface using **AWS S3** for file storage with a **PHP 5.3** backend.

[FRONT-END, BACK-END] Contributed to a **REST API** for **account provisioning** and client maintenance with **jQuery** and backed by **MongoDB**. Contributed to a **multi-tenant** browser-based **single-page-application (SPA)** for building marketing landing pages using **drag-and-drop** using HTML5, CSS3, and **YUI3**.

### (Team Lead) Senior Full-Stack Software Engineer

JUN 2010 - AUG 2011

Navigant (formerly Ethos Partners) - Denver, CO

[API ARCHITECTURE + IMPLEMENTATION, BACKEND, DEVOPS] Lead a team of 3 developers in successfully re-architecting a legacy monolithic web application that **allowed health care providers to create health risk assessments (HRA)** with custom business rules, **branching**, and demograph intake.

The original software was written with PHP 4.x which my team replaced with **PHP 5.x** using the **Zend Framework** and increased test coverage to **95%** (an increase of **94%**).

### Full-Stack Software Engineer

(CONTRACT) OCT 2009 - JUN 2010

Kaango - Greenwood Village, CO

Designed, implemented, and documented a Full-Stack application utilizing **PHP**, **HTML**, **JavaScript**, and **CSS** for **managing classifieds**. Implemented a job queue on top of **AWS SQS (Simple Queue Service)** for handling batches of classified ads which were **transformed** before being persisted into a **MySQL database** as well as indexed into **Solr** for **full-text search**.

Designed, implemented, and documented a Full-Stack application utilizing **PHP**, **HTML**, **JavaScript**, and **CSS** for a **question and answer website** (similar to StackOverflow). Implemented an authentication and **RBAC** (Role Based Access Control) system in **PHP**. Refactored poorly performing **SQL** queries by **tuning indexes**. **Increased unit test coverage** from 3% to approximately 80%.

### Full-Stack Software Engineer

(CONTRACT) MAR 2009 - OCT 2009

Reed Business Information - Highlands Ranch, CO

**Introduced unit testing** to the team. Re-factored tightly coupled code with **inversion of control** for better testability. Successfully recommended and utilized **cross-browser testing** tools. Implemented an **Object-Oriented JavaScript** based tool, which maps a list of valid **CSS definitions** to be **imported** and **exported** in bulk. Successfully **streamlined** the development team's **hiring processes**. Lead and **organized weekly user acceptance** testing **walkthroughs** for new features and enhancements.

Contributed to **launch** of a number of **high-traffic websites** such as: **furnituretoday.com, designnews.com, multichannel.com, controleng.com, mbtmag.com, mbtmag.com, and controleng.com**.

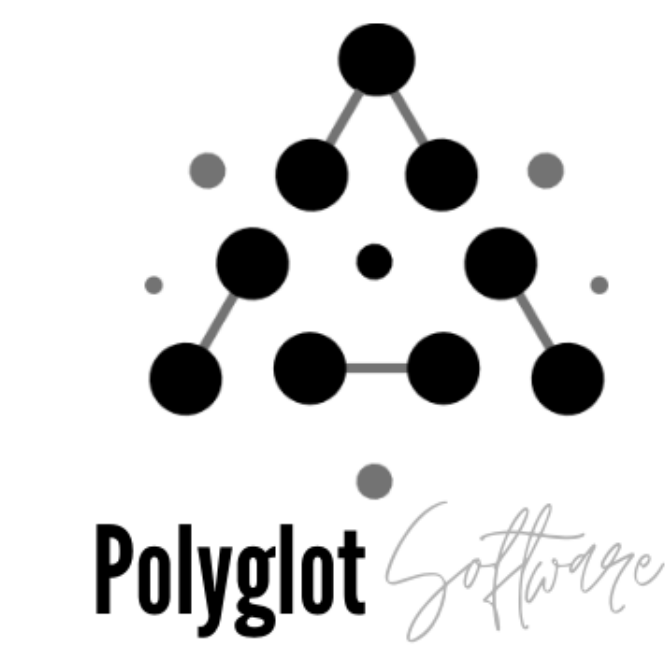
### Database Administrator, ERP & Subscriptions MGR.

NOV 2006 - MAR 2009

Gaiam, Inc - Louisville, CO

Managed continuity/subscription systems for **spiritualcinemacircle.com**. Developed a **SOAP** interface for retrieving data out of the **ECOMETRY ERP** system. Migrated an **ECOMETRY** system from **HP 3000 MPE/iX** to **Windows/MSSQL 2005**. Ported **Suprtool ETL** scripts to **SQL**, **DOS batch**, **AWK**, and **Python** scripts. Implemented **configuration change management** on **Subversion**. Integration with remote web services (**SOAP** and **REST**) including **email subscription** list synchronization. Managed the integration of **ECOMETRY** with a 3rd party fulfillment provider through **batch processes** and **webhooks**. This included a web-based **AJAX** interface for the fulfillment staff to **review** and **confirm** shipments.





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"Free time is the best attribute of a software engineer or an entrepreneur or anyone that makes things."

"To build a thing, it's important to understand and validate all assumptions made when initially deciding to build that thing."

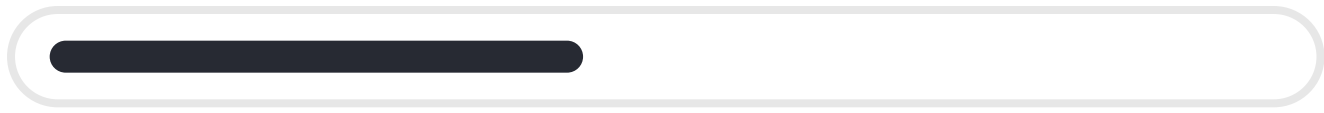
## WEB MAPPING

Web mapping libraries, frameworks, and Web APIs that I have worked with.

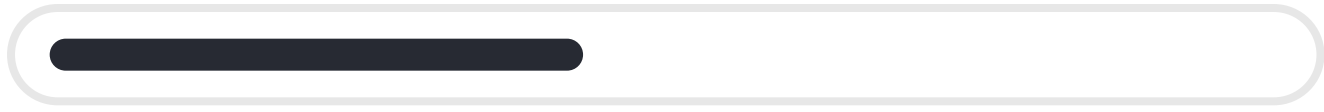
### MAPBOX



### LEAFLET



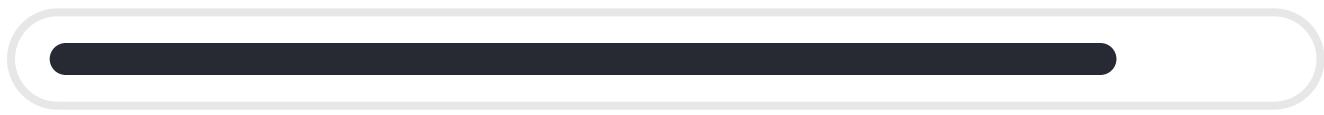
### WEB APIS (GOOGLE MAPS, MAPQUEST)



## CONTAINER PLATFORMS

Containerization platforms, including container orchestration platforms that I've worked with.

### DOCKER



### KUBERNETES (DEV DEPLOYMENTS)



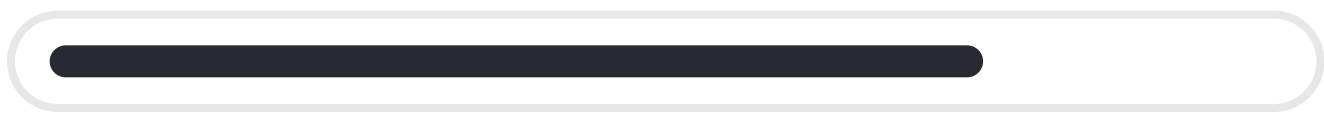
### MESOSPHERE (DEV DEPLOYMENTS)



## GRAPHICS, UI, DIAGRAMS

Vector graphics, photo editing, illustration, desktop publishing, UI prototyping, and diagramming programs I've worked with.

### VECTOR (SKETCH, ILLUSTRATOR, AFFINITY, FREEHAND)



### PHOTO (PHOTOSHOP, PIXELMATOR)



### DIAGRAMMING (OMNIGRAFFLE, BALSAMIQ, LUCIDCHART)



### PUBLISHING (PAGEMAKER, INDESIGN, QUARKXPRESS)



## NOW LEARNING \*

Technologies that I am currently actively learning are listed here. Because I'll run out of space here, look for items with an asterisk \* next to them. Those are items that should also be here.

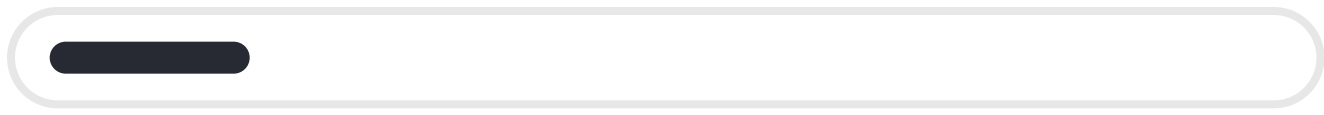
### SOFTWARE ENGINEERING MANAGEMENT \*



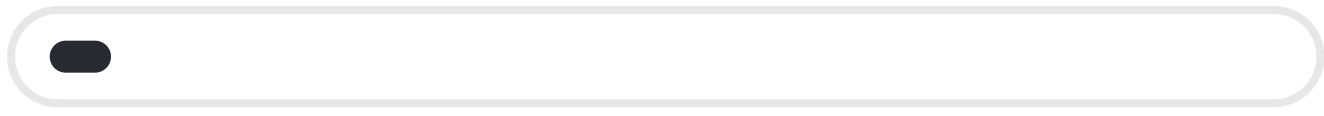
### DEEP LEARNING \*



### DATA SCIENCE \*



### KUBERNETES OPS WITHOUT HIGH-LEVEL TOOLING \*



## MY PRODUCTS

Entrepreneurial product ventures as well as notable things I've published...

### CTO, Senior Full-Stack Software Engineer TipOff, LLC.

JAN 2019 - PRESENT  
[tipoffgame.com](https://tipoffgame.com)

I stepped in as **CTO** of a **mobile game** company called **TipOff**. The previous developer stopped working on the app and subsequently disappeared and left the two co-founders **without source code** and no access to the **CMS** they were using to manage the game's content. I am currently working through a refactor and re-skin of the iOS version other devices coming soon.

As the source code was not available, I quickly learned the **React Native platform** with **expo** and **fastlane**. I was able to re-build the game from scratch in about 2-weeks. Though this was a minimal viable version of the game with some non-pertinent features missing; I had a working game ready to be published for **iOS**; though, I conceded that my builds were rejected several times for over one week before being accepted. I ran into various issues, mostly to do with screenshots; however, I also once attempted to publish an erroneous build; however, that experience taught me how to correctly version iOS builds for publishing through **expo**. Obviously **previous exposure to React** and the **npm ecosystem** helped keep the time to MVP relatively short.

### Book (Author) Learning new software programming languages quickly

AUG 2019 - PRESENT  
STATUS: Chapter 1 (started)

I have found that the only `_real_` shortcut to learning new programming languages quickly is to know at least one programming language at a confident level, then, for each language to be learned, apply the process detailed within the book. The process is tedious, yet simple, and it has not failed the author yet. If you aren't yet confident with any programming languages, then, my suggestion is to pick up a copy of "Learn to program X the hard way", practice a lot, and write real-world software programs, then, try

### Lead Instructor, Full-Stack Software Engineering Polyglot Software (Software Engineering Education)

DEC 2018 - PRESENT  
[wil.moore@polyglotsoftware.io](mailto:wil.moore@polyglotsoftware.io)

The current state of software engineering education does not scale well. I've mentored enough Junior software engineers to realize that most of their education stops as soon as they get hired. Some of the more diligent that seek mentors do better; however, they are essentially cut off from their original source of education which is the bootcamp.

### Full-Stack Software Engineering Polyglot Software (GeoSpatial SaaS Application)

DEC 2018 - PRESENT  
STATUS: UI (50%)

Pointmap is a GeoSpatial-based SaaS application that allows physical store owners with many locations (i.e. Apple) to provide a beautiful (and working) store locator which integrates into their existing website either by opening in a new window or via pop-over. We will in the future offer web component integrations with libraries such as React and Vue.



