Sean Reed

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Summary

I enjoy ripping apart existing systems and distributing them as rewritten components that improve scalability and maintainability. Along with this I enjoy working on new features and coming up with new solutions to any problem that may crop up in my day to day activities.

I live in the mountains around the Seattle area and try to get out into them when I can to ski, rock climb, hike, trail run, and mountain bike.

Experience

Senior Software Engineer

Didja Inc

Mar 2021 - Present (2 years 3 months)

During my time at Didja I performed the following tasks:

- Helped migrate off of an old Python codebase and helped complete the rewrite in Ruby on Rails
- During the rewrite helped develop internal ruby gems to aid in our development cycle and create consistency between our various micro services.
- Implemented token based authentication in order to prevent unauthorized access to video streams.
- Maintained code and performed occasional bug fixes and refactors to improve performance and stability.
- Worked with other engineers to build out specifications and cowrote design docs to aid in the development process.
- Used terraform to bring up new infrastructure and maintain current infrastructure as needed.

Tiny Founder

Tiny Software Company

Dec 2021 - Present (1 year 6 months)

- Designing near real time signal generation from various data streams to detect and amplify advertising signals.
- Designing and implementing the backend microservice architecture.
- Designing and implementing the frontend to build out our MVP.

Founder

Klettern Software

Mar 2020 - Jun 2021 (1 year 4 months)

Built and trained the backend infrastructure that powers our BetaSight app.

Looking for beta testers!

Software Engineer

Threadloom
Jun 2019 - Mar 2021 (1 year 10 months)
Worked with the team and implemented the following:

- Built the first Feed and Digest prototypes for Primary.org
- Helped speed up the Feed and Digest backend code by moving to pre-built sorted sets stored inside of Redis.
- Built deployment tools to easily deploy our dockerized microservices and update the GraphQL schemas.
- Helped manage the k8s clusters. Performed migrations as well as tuning k8s parameters to minimize cost overruns and make sure that services were available.
- Worked with UX designer to build out required backend features to support design ambitions.
- Spearheaded the use of GraphQL as the API layer to ease frontend development as well as provide flexible queries during the team's prototyping stage.
- Built the initial streaming Google Dataflow pipelines to pull together content from our Forum and Reddit stores to build the Feeds and Digests.

Substitute Teacher
Trilogy Education
Jan 2019 - Dec 2019 (1 year)

Software Engineer
Crowd Cow
May 2018 - May 2019 (1 year 1 month)
Worked on improving our Fulfillment Center infrastructure:

- Rebuilt FC UI to solve business requirements and pulling in feedback from FC associates.
- Redid our inventory receiving process to move our products into track-able boxes.
- Built internal tools to track product quality throughout our receiving, picking, and packing processes.
- Redid networking infrastructure to improve the reliability of FC operations.

Worked with operations and merchandising to improve productivity and increase accuracy:

- Built tracking and reporting tools that reports issues with our products at various stages of fulfillment.
- Added stateful actions into the order process to improve communication between customer service and FC staff.
- Built tools to allow operations to easily add new products into the pipeline for receiving and selling on the site.
- Improved merchandising tools increase their productivity as well as make managing our many products easier.

Working across teams and accomplished:

- Modified our order scheduling to change from a event and weekly based shipping schedule to our new quick ship model that attempts to ship next day when possible
- Fixed bug fixes throughout our stack from the front-end to the back-end.
- Worked to support both FC's throughout the day to maintain system stability and provide real time help.

- Rebuilt the corporate network to provide a more secure and reliable office network.
- Provided on-call support as needed to maintain site up-time and reliability.

Senior Software Engineer
Valassis Marketing Solutions
Aug 2017 - May 2018 (10 months)
Helped work on the internal order management system to improve stability and efficiency through code and database improvements.

Rewrote legacy coupon management and redemption system to be more modern, flexible, and correct.

Developed and designed the new queuing system for backend services to ease development and improve throughput and integrity.

Lead Software Engineer
buildpulse
Feb 2017 - Jul 2017 (6 months)
Technical lead working on the backend API and infrastructure. Developing and setting up automated build systems, deployment, and testing pipelines to change how the development team develops and deploys code to minimize system downtime and improve scalability and reliability. Also investigating and developing systems for cross-cloud service management and discovery as well as using on-prem hardware in a distributed and resilient architecture to meet company goals.

Using Docker and Nomad to let the company worry about acquiring customers without having to worry about if the platform is ready for them.

Along with the software side I mentor and help the engineering team with their code changes as well as helping with technical questions and design details. This means sitting one on one with other engineers working through problems to setting up team meetings to get input and determine the course of action that everyone can agree with. Working to promote developer trust as well as making sure everyone is able to have time to learn and grow as an engineer.

Projects:
- Taking the P99 of the api from 4seconds to 240ms.
- Scaling and adding redundancy to our Celery infrastructure
- Building AWS AMI's using Packer and deploying a more dispensable architecture.
- Deploying and utilizing Nomad to scale backend services to dynamically scale and burn down ingest queues as needed.

Software Consultant
Threat Stack, Inc
Feb 2017 - May 2017 (4 months)
Working on maintaining and supporting previous projects throughout the Threat Stack infrastructure.

Software Engineer
Threat Stack, Inc

Mar 2015 - Feb 2017 (2 years)
Backend Engineer that worked on improving the infrastructure and helped migrate key portions of the stack from node.js to scala.

Designed and implemented the Threat Intelligence product. Worked on efficiency of IP matching through billions of event's per day against lists of tens of thousands of potentially malicious IP's gathered through third and first party sources. Implemented bloomfilter and hyperloglog algorithms to facilitate the performance needed to scale with event ingest growth as well as to ensure the accuracy of the matching.

Worked on a near real time event de-duplication algorithm that would potentially saved hundreds of gigabytes of bandwidth per month, this project was side lined to be pushed into future storage.

Helped with maintaining and optimizing the Elasticsearch ingest pipeline as well as tweaking the systems that fed into this pipeline to increase efficiency and work through issues that arose.

Software Engineer
HubSpot
Jun 2014 - Mar 2015 (10 months)
I worked on the Sidekick (HubSpot Sales) and HubSpot CRM (also HubSpot Sales) teams working on various aspects of the platform.

For Sidekick I worked on the ingestion of data and storing the data into Elasticsearch for more flexible searching for internal customers, this was used to find emails that did not notify correctly as well as for instances that email's did not notify at all but should have.

On the HubSpot Sales team I worked on the backbone.js and react.js portions of the front end to implement new features for the CRM portions of the product.

I helped to design and implement, a now defunct, product that was designed to facilitate the presentation of PDF's as well as Powerpoints for use during sales calls. During the implementation I worked on a failover system that used Redis to ensure that our websocket connections could handle client/server failures. This allowed us to do rolling deploys without interrupting any on going sales calls using the platform. I also worked on the pipeline that the PDF's and Powerpoints went through that would strip out the metadata as well as create images of each page and slide for use in the platform ensuring image quality as well as being as feature complete with the Powerpoint and PDF formats as possible to make sure that we could give the presenters as much information from their slide as possible.

Software Development Engineer Intern
Amazon
May 2013 - Aug 2013 (4 months)
My intern project was to design and implement a pilot for automated device testing. This project consisted of three parts. The first was learning and control various Android and Apple devices in a generic manner through the use of a scripting language. The second part consisted of created an abstraction over these devices so that they could be pooled together in a manner that allowed for checking in and out devices during testing phases. The third part was integrating this service into the testing framework that was, at the time, in use by Amazon. By completing this project the hope was to

improve the workflow and further improve testing at Amazon to ensure that the customer experience was retained as the interfaces and software was changed.

Technologies used were Android SDK, Apple IOS SDK, and Java.

Software Development Engineer Intern

Webs

Jun 2012 - Jan 2013 (8 months)

My work ranged from bug fixes to internal tools. My first task was starting the conversion to Gradle as the build system from maven. The bug fixes I performed dealt with email security and various other small tweaks or inconsistencies. My final project consisted of graphing and determining the velocity of the team as a whole to try and figure out points where the team was having problems and to help solve these problems as they are or before they occur rather than after.

Technologies used were Gradle, Java, Ruby on Rails, and MySql

Web Designer and Backend Design

Aug 2011 - Jan 2013 (1 year 6 months)

Web design and custom written content management systems. Real time web applications.

Junior Software Developer

TrafficLand

Dec 2011 - Jun 2012 (7 months)

Helped develop internal tools for database management and focused on database administration.

Buspreneur

StartupBus

Mar 2012 - Mar 2012 (1 month)

Worked on OurTable project.

Junior Software Developer

TrafficLand

Jul 2009 - Aug 2010 (1 year 2 months)

Worked on internal video stream reverse engineering and worked on packet filters.

Education

Udacity

Self-driving Car Nanodegree, Self-driving Car Nanodegree

2019 - 2019

Working through the Self-driving Car Nanodegree.

Udacity

Machine Learning Engineer Nanodegree, Machine Learning

2018 - 2019
Working through the Machine Learning Nanodegree

Roanoke College

Bachelor of Science (BS), Computer Science

2010 - 2014

I went through Roanoke College's Computer Science program and learned valuable skills that have allowed me to continue to learn and leverage my confidence in order to perform at work.

Chantilly Highschool

2005 - 2009

Licenses & Certifications

Triplebyte certified Generalist Software Engineer - Triplebyte

Skills

Ruby on Rails • Terraform • Node.js • aws mediatailor • Amazon ECS • Programming • Web Applications • Databases • Software Design • Database Design