

Experience

STAFF SOFTWARE ENGINEER Sift Science

Apr 2020 - Present

- Improved scalability of GDPR compliance systems that evaluated over 500 billion records weekly.
 - Removed artificial concurrency limits in Airflow DAG structure, replacing them with flexible parallelism limits using Airflow task pools.
 - Experimented with rewriting Apache Crunch ETL jobs as Spark ETL jobs to improve reliability on Google Cloud Dataproc.
- Helped reduce team's average weekly alerts by 50% by implementing quarterly operational excellence reviews and specifying improvement action items.
- Split monolithic Gradle projects into smaller subprojects to exclude unnecessary dependencies and shrink various JAR sizes by over 150Mb.

STAFF SOFTWARE ENGINEER Branch.io

Oct 2018 - Jan 2020

- Built and maintained analytics systems for search user engagement and content quality.
 - Built and optimized Spark jobs to join millions of disparate search logs to build unified datasets used to optimize search results and increase user engagement.
 - Optimized Looker data models to reduce dashboard refresh times by 80%.
 - Collaborated with the search content team to plan and implement a quarterly roadmap of content quality metrics and insights.
- Migrated ad attribution logic and data, including over 50 billion historical records, into the Branch attribution systems to support a product acquisition and customer migration.
 - Built Spark jobs to filter out unnecessary data from billions of attribution logs, reducing the overall import data volume by over 30%.
 - Implemented an on-call review strategy that exposed common failures of the high-availability ad attribution pipeline, resulting in a sustained reduction in on-call pages.

SOFTWARE ENGINEER 4 SOFTWARE ENGINEER 3 SOFTWARE ENGINEER TUNE

Dec 2017 - Sep 2018

Dec 2015 - Dec 2017

May 2014 - Dec 2015

- Subject-matter expert and technical leader for the Go programming language at TUNE.
- Owned the migration of a high-volume web service from AWS EC2 hardware to shared and autoscaled AWS ECS hardware, saving over \$20k/month.
- Owned development and deployment of an AWS SQS message packing library that reduced SQS API call frequency by over 50%, saving over \$20k/month.
- Coordinated the application update component of a data deletion project that reduced DynamoDB storage cost by over \$200k/month.
- Researched Go scheduler performance, focusing on avoiding the pitfalls of Go's semi-preemptive scheduler, and delivered findings in a presentation at a Seattle Go Meetup.

SOFTWARE DEVELOPMENT ENGINEER

Amazon (Prime Video)

Jan 2013 – May 2014

- Created and supported a new video ingestion platform for Prime Video, capable of ingesting and analyzing over 150 TB of video content per day.

ASSOCIATE MEMBER TECHNICAL STAFF

Oracle (formerly Vitruve)

Sept 2011 – Dec 2012

- Developed features for and supported the *Publisher* product, a social media marketing automation and management cloud application.

Education

Southern Polytechnic State University

Bachelor of Science - Computer Science

Aug 2009 – May 2011

Georgia Institute of Technology

Aug 2005 – May 2009

Skills

Languages

Go, Python, Java, JavaScript, PHP, SQL, Regular Expressions

Technologies

AWS (S3, DynamoDB, EMR), Google Cloud (Storage, Dataproc), Apache Spark, PrestoDB, Kafka, Docker, Kubernetes, GitLab, GitHub

- Adept with Git source control manager.
- Skilled participating in and establishing iterative development practices.

Projects

biglake.io

A domain name registrar cross-shopping web app written in Go.

manualsmap.com

Apple Maps-based web app for tagging and viewing manual transmission cars near you. See code at <https://github.com/matthewdale/manualsmap.com>

github.com/matthewdale/universal

A Go library for expressing message processing logic and utilities that simplify building and running message processing applications.

github.com/matthewdale/promise

A simple, fast implementation of a promise in Go.

github.com/matthewdale/fnplot

Package fnplot plots input/output values for arbitrary functions on a 2D grid.

Open Source

github.com/zaquestion/lab

Contributed changes necessary to make Lab development possible on Windows.

github.com/rakyll/statik

Contributed a performance patch that prevents the need to repeatedly uncompress the embedded contents and adds unit test coverage.

github.com/kidoman/embd

Contributed a driver for the Hitachi HD44780 character LCD controller.