Colton J. McCurdy

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Work Experience

2017-Now **StockX, LLC** • (Remote), *Software Engineer*.
- Piloted full-time remote work for the company.
- Designed, implemented, maintained and thoroughly-documented a pipeline for managing a dynamic market's products on Google Shopping responsible for a large portion of the company's monthly marketing spend.
- Contributed to the internationalization of the website (i.e., support for multiple currencies and languages).
- Mentored developers transitioning to Go as the company adopted the language pervasively on the backend.
- Established and enforced a testing infrastructure and documentation standard for backend services.
- Developed a wrapper of the Redis library in Go to distribute load to read-only replicas.
- Migrated Go services to use a standardized, multi-stage Docker build, reducing Docker image size by 120%.
- Co-lead and assisted in adding continuous integration and deployment (CI/CD) pipelines to all backend services.
- Assisted in creating a centralized infrastructure wiki to document system intricacies and design decisions.
- Experienced scaling software and organizational systems as the 10th engineer during a time when the company faced more than 10x traffic and Engineering organization growth.

Technologies

Language(s): Go

Amazon Web Service, SQS, SNS, Lambda, DynamoDB

Docker, Kubernetes, Terraform

Service Oriented Architecture, REST

PostgreSQL, NoSQL (Redis, DynamoDB)

Version Control with Git

Open-Source Software

splitfile: Makes suggestions for splitting Go packages into multiple files to improve readability.
- https://github.com/mccurdyc/splitfile

neighbor: GitHub search with arbitrary concurrent acquisition and exploration of open-source projects.
- https://github.com/mccurdyc/neighbor

mrstudyr: Retrospectively studying mutant reduction strategies.
- https://github.com/mccurdyc/mrstudyr

Publications

2018 **Automatic detection and removal of ineffective mutants for the mutation analysis of relational database schemas,**
Phil McMinn, Chris J. Wright, Colton J. McCurdy and Gregory M. Kapfhammer
Transactions on Software Engineering, 2018.

2016 **mrstudyr: Retrospectively Studying the Effectiveness of Mutant Reduction Techniques,**
Colton J. McCurdy, Phil McMinn, Gregory M. Kapfhammer
Proceedings of the 32nd International Conference on Software Maintenance and Evolution.

2016 **SchemaAnalyst: Search-based test data generation for relational database schemas,**
Phil McMinn, Chris J. Wright, Cody Kinneer, Colton J. McCurdy, Michael Camara, Gregory M. Kapfhammer
Proceedings of the 32nd International Conference on Software Maintenance and Evolution.

Education

May 2017 **B.S. in Computer Science, Allegheny College, Adviser: Dr. Gregory M. Kapfhammer**
- Cumulative GPA: 3.525 / 4.000   In-Major GPA: 3.656 / 4.000

2016-2017 **Best Senior Thesis Award**
A departmental award recognizing a student for writing the best undergraduate thesis.

2015-2016 **Outstanding Junior Major**
Recognizes a junior majoring in computer science who has achieved the highest GPA in departmental courses.

2013-2016 **Alden Scholar (Dean's List)**
Completed a minimum of 30 credit hours and achieving a grade point average of 3.20 or higher.