

Work Experience

2017–Now **StockX, LLC** • Remote, *Software Engineer*.

- Designed, implemented, maintained and thoroughly-documented a pipeline for managing a dynamic market's products on Google Shopping responsible for 30% of the company's monthly marketing spend.
- Co-lead and delivered on time the internationalization of the website.
- Mentored developers transitioning to Go as the company adopted the language pervasively on the backend.
- Built a service for generating related and personalized product recommendations.
- 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 image size by 120%.
- Assisted in creating a centralized infrastructure wiki to document system intricacies and design decisions.
- Piloted full-time remote work for the Engineering team.

Technologies

Go, Ruby, PHP, Python, Clojure

Amazon Web Service, SQS, SNS, Lambda

Docker, Kubernetes, Istio, Terraform

Service Oriented Architecture, REST

Redis, PostgreSQL, MySQL

Version Control with Git

Software

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>

airtable-expenses: A migration tool for moving personal expenses from Google Sheet to Airtable.

- <https://github.com/mccurdyc/airtable-expenses>

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.

Academic Experience

2015–2017 **Using Mutation Analysis to Identify Relational Database Schema Faults**

- Introduced an approach for retrospectively evaluating mutant reduction strategies.
- Empirically analyzed cost-reducing strategies for mutation testing of relational database schemas.
- Developed and released an open-source tool for empirically analyzing mutant reduction techniques.
- Published two papers in an international journal inaugurating the release of open-source tools.
- Presented on the paper introducing one of the open-source tools at an international conference.
- Collaborated remotely with an international research group.