

EXPERIENCE

Amazon Web Services – SDE – Transactional Services – 2017 – current

- Designed and implemented a solution to route traffic to our internal storage service within the same availability zone, reducing median write latencies by about 25%
- Designed a garbage collection service to safely remove petabytes of unneeded data from S3
- Uncovered an inefficiency causing unnecessary and expensive java object serialization in many AWS services while authenticating requests. Contributed fixes to help others avoid the issue.
- Significantly reduced operational burden by designing a control-plane workflow to automate the process of safely replacing unhealthy hosts in our data storage clusters

Amazon Web Services – SDE – Identity – 2015 – 2017

- Moved TLS termination on the AWS Security Token Service from the load balancers to the individual service hosts, improving the service's scalability and security posture
- Created a package to which allows services to pull throttling rules dynamically from S3 without a service deployment. As of 2020, this package is still used by a large number of AWS services, including Route53 and IAM.

Amazon Web Services – SDE Intern – Identity – Summer 2014

- Created an internal website to support self-service creation of AWS Managed Policies.
- Utilized a Ruby on Rails stack, RDS as a data store, and RSpec for comprehensive unit testing
- As of 2020, the website is still heavily used by AWS teams and has been extended to cover additional use cases.

Amazon.com – SDE Intern – Inventory Placement – Summer 2013

- Implemented a system to test the accuracy of Amazon's inventory placement predictions
- Collaborated with a remote development team in Toronto to understand and modify their existing Java-based scheduling system

BMW Manufacturing – Co-op – Metrology Department – Spring 2013

- Created a web application for tracking vehicle measurement requests in C# and ASP.net
- Reduced web dashboard loading time from 40 minutes to less than one minute by optimizing existing SQL queries

EDUCATION

University of Pittsburgh – Computer Engineering – 2010 - 2015

- Graduated with a bachelors of science degree from the Swanson School of Engineering
- Final cumulative GPA of 3.94