

## EDUCATION

**Stony Brook University**, Stony Brook

*Computer Science • GPA 3.92/4.0 • 2016-2019 (Dec.)*

## PROJECTS

**Cirrus** | SCSS / JS

- A modern, flexible SCSS framework bundled with pre-styled components such as tabs, cards, modals, and modularized theming.
- Designed with relatively small footprint, using only **17.6 kb** when minified and gzipped.
- Maintained on Github with 700+ stars.

**Smores Underflow** | TypeScript

- A scalable Stack Overflow clone built with **React, Koa, MongoDB, Kibana, Elastic Search, Redis, Nginx, PM2,** and **RabbitMQ**.
- Hosted sharded MongoDB, clustered Redis, and microservices through **Openstack**.
- Service handled 200,000 requests and 1,000 users over a 10-minute span (~333 TPS) simulating real use. Service limited to 20 vCPUs and 20GB of RAM.

**Coronavirus-us-api** | Python

- A microservice built using **FastAPI, Redis,** and **Swagger** deployed on **Heroku** with CI/CD using **Travis CI**.
- Serves up to date information on Coronavirus cases in the US on the country, state, and county levels.

**Polarity** | VB.NET / JS / HTML

- Fast web browser built to optimize memory consumption through active garbage collection, yielding up to 50% lower RAM usage compared to Google Chrome.
- Received **1,000,000+ downloads** since its release in 2013, averaging **4 stars** on popular download sites like CNET and Softpedia.

## EXPERIENCE

**Amazon Web Services** – Software Development Engineer

*Backend* | Feb. 2020 – Present

- Design, implement, test, and maintain core financial services that process all transactional data for ISVs and resellers in AWS Marketplace.
- Rearchitecting legacy systems to leverage serverless technology using **AWS CDK, ECS, Fargate, RDS, Lambda,** and **Step Functions**.
- Helped launch support for 13 different currencies to improve buyer experience on the platform.

**Amazon** – Software Development Engineer Intern

*Backend/Distributed Systems* | Jun. 2019 – Aug. 2019

- Implemented new features in custom severless orchestrator dedicated to powering AWS Marketplace workflows.
- Utilized test-driven development to implement APIs for platform team to add additional functionality for AWS Marketplace platform. Utilized Mockito and JUnit for testing.
- Designed and implemented serverless architecture using **AWS CloudFormation, Lambda, SNS, SQS** and **DynamoDB** to parallelize data processing for incoming requests to service. Resulted in increased throughput by 20x (to 700 TPS) and reduced server latencies by 34% on average.

**LBI Software** – Software Engineering Intern

*Fullstack* | May 2018 – Aug. 2018

- Full-stack development on LBI's human resources suite using **Angular, TypeScript, Spring,** and **SQL**.
- Reduced server startup time by 50% by building a wrapper for the BIRT (Business Intelligence) runtime to run parallel with the application, rather than as a separate deployment.
- Implemented RESTful API secured with JWT authentication.

**Teaching Assistant for System Fundamentals**

*Teaching Assistant* | Sept. 2017 – Dec. 2018

- Taught classes of 15-25 students concepts of computer organization, MIPS architecture, and control path design.