# **Bradley Gulli**

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# **PROFESSIONAL EXPERIENCE**

Amazon, Seattle, Washington

7/2021 - present

#### Software Development Engineer-II (7/2021-present)

- Utilized AWS Lambda, AWS Step Functions, and AWS OpenSearch Service to create a k-nearest neighbors search engine for image searching in order to facilitate ML training data set collection for data science teams in Amazon Prime Video.
- Supported data science team in Amazon Prime Video by creating and maintaining useful infrastructure such as AWS SageMaker endpoints and the Docker images used for ML.
- Designed, implemented, and maintained asset management, software deployment, and defect detection systems for Amazon's Fleet Edge devices -- IoT devices fitted with multiple sensors inside of Amazon delivery vans which process data at the edge and communicate with the cloud.
- Designed, led, and implemented a large-scale migration of thousands of Fleet Edge devices from AWS Greengrass V1 to AWS Greengrass V2, the core IoT software that runs on the Fleet Edge device. This migration led to a greatly improved and simplified deployment system, and the deprecation of old backend systems.
- Designed and implemented web UI components in React for an internal asset management system for keeping track of states and configurations of our multi thousand device fleet.
- Designed and led junior engineers in implementing a system utilizing AWS Lambda, AWS SNS, and AWS IoT Core, for vending notifications to partner teams when Fleet Edge devices receive latest deployments or move between active and defective states. This allowed partner teams to consume this info and run workflows according to the notifications.
- Implemented major portions of an Application Deployment system which allowed partner teams to deploy kubernetes applications to Fleet Edge devices.
- Contributed to operational excellence by improving dashboards, metrics gathering, and alarms. Improved metrics gathering system allowing us to process and aggregate thousands of metrics per second from thousands of devices.

#### Tableau Software, Seattle, Washington

Software Engineer MTS (4/2020 - 7/2021)

- Wrote well-documented, easily maintainable, and well tested Vue.js frontend and python, typescript, and C# backend code for the Content Experience team at Tableau.
- Built new front-end features for and maintained the pipeline for publishing technical documentation to help.tableau.com.
- Designed and implemented a lightweight and easily maintainable tool using node.js and AWS Lambda to generate sitemaps for help.tableau.com, replacing a more complicated legacy tool which only mapped part of the site, improving SEO.
- Utilized Terraform to manage AWS infrastructure.
- Worked with a team of documentation writers to ensure our build and publishing pipeline stayed green, helping them debug issues when they arose.
- Worked on migrating away from a legacy build and deployment system with multiple manual steps that took 2 devs a full day, to a CI/CD pipeline with fully automated builds and deployments.

4/2020 - 7/2021

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#### Page Two

#### Amazon, Seattle, Washington

# Software Development Engineer-II (10/2019 – 4/2020)

- Write well-documented, easily maintainable, and well tested React-Native Mobile frontend and backend code for the Alexa Shopping List on the Alexa Companion App and Amazon Mobile Shopping App.
- Partner with UI/UX designers and develop frontend aesthetics, structure, and interactivity.
- Designed and implemented a system to automatically process data privacy compliance requests, including GDPR, COPPA, and CCPA.
- Guided partner teams focused on multiple areas, including personalization to display speaker names on shopping list for items added via voice.
- Mentor newly hired engineers and familiarize more senior engineers new to the team on technology stack and business strategies, goals, and objectives.

# Software Development Engineer-I (4/2018 – 10/2019)

- Innovated, built, and relaunched an improved Alexa Shopping List in Amazon Shopping App.
  - Designed and coded additional features built with React Native on new backend, including item categorization, list sharing, offline mode, and first-time user experience.
  - Built scalable and extensible backend with Spring MVC and AWS technologies.
  - Incorporated offline functionality that syncs user changes next time connection is established.
- Reduced load time of Alexa Shopping List by 90% to dramatically improve user experience.
  - Investigated and identified root cause of high app latency.
  - Rearchitected sign in flow and reduced number of network calls required to start app.
- Designed and implemented offline functionality for Alexa Shopping List
  - Introduced Redux library and pattern to the team
  - Designed backend API to sync data when connection is established
- Developed service enabling app notifications to customers shopping for groceries on Alexa via voice.
  - Made grocery shopping on Alexa through voice possible by sending customers a mobile notification or email linking to their grocery carts to review before checking out.
- Designed and implemented system to aggregate grocery stores in user specified geolocations across multiple data providers without containing duplicates.
- Improved quality of React-Native frontend code by introducing team to Jest testing framework and Enzyme testing utility
- Partnered with Business Intelligence (BI) engineer to design and develop a system for publishing real-time business metrics on app notification delivery and open rates.
- Utilized infrastructure as code to create operational dashboards, monitors, and alarms for multiple services.
- Mentored and guided intern through full stack work and new shopping list feature development.

# Software Development Engineer, Intern (Summer, 2017)

- Wrote clean, maintainable, and well-tested code for backend services for Alexa Voice Shopping Organization aimed at increasing customer engagement and transforming shopping on Alexa into a usual routine.
- Created service for scheduling Alexa notifications for Echo devices
  - Developed feature to send customers reminder notifications for reordering of frequently purchased consumables.
  - Enabled prompt for customers shopping on Alexa to setup reorder notifications and if accepted, sent customers scheduled reorder notifications.

6/2017 – 4/2020

 Resolved Alexa notifications arriving on customer devices during middle of night, waking them up; service currently in use to make sure notification are sent during reasonable hours.

TECHNICAL PROFICIENCIES	
Platforms:	Linux, Unix, MacOS
Tools:	Python, Java, JavaScript / TypeScript, React, React Native, REST APIs, Spring Boot, Spring MVC, Git, Dagger, CDK, AWS Cloudformation, AWS DynamoDB, AWS S3, AWS SQS, AWS Lambda, AWS Step Functions, AWS Kinesis, AWS IoT, AWS OpenSearch, Jest and Enzyme, JUnit and Mockito
Methodologies:	Software Development Life Cycle, Scrum, DevOps, Database Design, Unit and Integration Testing

#### **EDUCATION**

Bachelor of Science in Computer Science – 2018 California State Polytechnic University, Pomona, California