

SAI PRASHANTH CHANDRAMOULI (“SAI”)

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SUMMARY

Full-stack Software Development Engineer at **Amazon** with **3 years** of experience building secure Amazon-scale **web applications** with Ruby on Rails, JavaScript - jQuery and ReactJS, **backend services** with Java, Kotlin, and **serverless applications** using AWS technologies - API Gateway, Lambda, Cognito, DynamoDB, SNS, SQS, ElasticSearch.

EDUCATION

Arizona State University, Master's (Thesis) in Computer Science

May 2016

Anna University, Bachelor's in Computer Science and Engineering

Mar 2014

EXPERIENCE

Amazon, Inc., Software Development Engineer II, Compliance - Transaction Risk Management.

Dec 2017 – Present

- Designed and implemented a **Self Service portal for non-engineers** (TPM's, Product and Compliance Managers) to automatically generate the code for **launching risk investigation** tools in different regions and marketplaces, reducing the engineering effort from **3 weeks to 0.5 days (96% reduction)** in time consumed) for each new region, resulting in **3-year annualized savings of \$350,000**.
- Implemented and launched risk investigation tools in **3 new regions** - Amazon Payments **UK**, Amazon Payments **Europe**, and Amazon Payments **India** enabling **18 types** of investigations for Amazon businesses to stay compliant with regulations.
- Designed and implemented clustered case support for investigating related merchants enabling investigations of up to **2800 sellers simultaneously** to be conducted and filed to regulatory bodies, resulting in a **savings of \$12,000** per year.
- Migrated legacy search service to **AWS ElasticSearch** reducing page load times from **8 seconds to 3.4 seconds (57% reduction)** and reducing hardware cost by **\$6500** a year (**70% reduction** in cost).
- Conducted over **250 interviews** to hire Software Developers for Amazon, resulting in 82 successful hires. Currently a Bar-Raiser-in-training (BRIT) working to ensure the quality of all new hires at Amazon.

Amazon, Inc., Software Development Engineer, Compliance - Suspicious Activity Monitoring.

Aug 2016 – Dec 2017

- Designed and implemented a pre-push hook to verify code before merging with live pipelines that reduced pipeline failures from **24 failures** a month to **11 failures (54% reduction)** in failures) a month.
- Implemented and launched support for Suspicious Activity monitoring, Denied Party Screening, Identity verification and TIN verification.
- Designed and implemented a **Bulk report generation and download** feature, reducing investigation time from **9 hours to under 6 minutes (98% reduction)** in time consumed) resulting in cost savings of **\$30,000** per year.
- Received **"Truth Seeker"** award for actively working to **reduce operational cost** of software.

Mozilla Corporation, Firefox Accounts Engineering Intern.

Summer 2016

- Engineered the infrastructure for performing reverse geo-lookups to accurately detect the login location of a user, and redesigned the login emails to showcase this login history to the user (merged in Firefox-67 used by **~100 million** users).
- Designed a **Geolocation-based profiling** mechanism to maintain login history and detect and flag anomalous logins.
- Designed the user interface for displaying password strength to the user, with live feedback as they enter the password.

Mozilla Corporation, Cloud Services Intern.

Summer 2015

- Designed and developed a **2-Factor Authentication system** for **Firefox** Accounts using **Node.js** with **Google-Authenticator**, and **SMS** as a backup 2nd factor.
- Implemented a **Password Strength Checker** for **Firefox** Accounts, using a **Bloom Filter** that maintains a list of common password hashes, that got merged in Firefox-41 (used by **~90 million** users).
- Deployed an **HTML parser** to scan generated HTML pages and E-Mail translations and remove **malicious translations** to prevent **cross-site scripting** vulnerabilities, in Firefox-40 train.

TECHNICAL SKILLS

Technologies: HTML, CSS, JavaScript, Ruby on Rails, Java, Kotlin, XML, Sass.

AWS Technologies: Lambda, API Gateway, Amplify, AppSync, Cognito, DynamoDB, ElasticSearch, SQS, SNS, Network Load Balancer.

Frameworks/Libraries: ReactJS, SemanticUI, jQuery, Bootstrap, jQueryUI, Mocha, Sinon, ESLint, Chai.

PERSONAL PROJECTS

Thesis on E-Mail Header Injections – Arizona State University.

Fall 2015 – Spring 2016

- Designed a black-box approach to detect E-mail Header Injection vulnerabilities in a web application.
- Developed a system to crawl the web and automatically detect E-mail Header Injection vulnerabilities.
- Used this system to crawl **1 million forms** and test them with E- mail Header Injection payloads. Discovered **673 vulnerable URLs** across 296 domains.

GitChecker

Dec 2015

- Created a program using GitHub's API to track and analyze my coding patterns, the languages I code in, the average number of open-source projects I contribute to, the average number of lines I write, and the average amount of time I spend coding each year.
- This allowed me to analyze which languages I feel most comfortable with and which ones I needed to focus more on. Results of this analysis can be found at: <http://tda.github.io/HTMLJS-GithubAPI/>.

CONFERENCE TALKS AND WORKSHOPS

React Native Amazon (RNA) Seattle 2019 - <i>Amazon's web developer conference - TBD</i> <ul style="list-style-type: none">· Will be conducting a workshop on using React Native with AWS toolchain for secure deployment in production for Amazon's external facing products.	Jan 2020
Webdevcon New York 2019 - <i>Amazon's web developer conference</i> <ul style="list-style-type: none">· Will be conducting a workshop for 170 Amazon developers on Building ReactNative Mobile apps with AWS integration using AWS Amplify.	Oct 2019
Webdevcon Amsterdam 2019 - <i>Amazon's web developer conference</i> <ul style="list-style-type: none">· Presenting an advanced talk on using React hooks in production at Amazon to 300 Amazon developers.· Conducting a workshop for 120 Amazon developers on Building Serverless Applications with AWS.· Conducting a workshop for 120 Amazon developers on using GraphQL to build production services at Amazon.	Jul 2019
Webdevcon Seattle 2019 - <i>Amazon's web developer conference</i> <ul style="list-style-type: none">· Presented an introductory talk on React hooks to 1500 Amazon developers to promote adoption of Hooks across Amazon.· Conducted a workshop for 105 Amazon developers on Building Serverless Web Applications with Native AWS.	May 2019
Webdevcon Edinburgh 2018 - <i>Amazon's web developer conference</i> <ul style="list-style-type: none">· Presented a talk on using CSS Grids in production to 160 web developers.	Jul 2018
Zoncon Seattle 2018 - <i>Amazon's premier security conference</i> <ul style="list-style-type: none">· Presented a talk to 1200 engineers on E-Mail header injections and how to prevent it in Amazon systems.	May 2017