

ARJUN KUNJILWAR

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EDUCATION

The University of Texas at Austin

May 2021 (expected)

BS in Computer Science, Applied Statistical Modeling Certificate, Creative Writing Certificate (GPA: 4.00 / 4.00)

- Relevant Coursework: Data Structures, Algorithms, Software Engineering, Computer Architecture, Principles of Computer Systems, Artificial Intelligence Honors, Info Retrieval and Web Search, Statistical Learning and Inference, Linear Algebra

TECHNICAL SKILLS

Proficient in Java, Python, Swift, C, Objective-C. Familiar with JavaScript (React JS), SQL, HTML, x86, Perl, Bash.

EXPERIENCE

Amazon Web Services, Inc.

May – August 2019

Software Development Engineer Intern, DynamoDB Global Tables Team

- Designed and implemented an internal control plane service for performing on-demand or periodic chaos engineering attacks on clusters of EC2 instances to simulate node failures in a distributed system.
- Utilized a variety of AWS services for orchestration, including Systems Manager (for downloading attack scripts to and executing commands on EC2 instances within a virtual private cloud), S3 and DynamoDB (for storing EC2 cluster metadata), CloudWatch Events (for triggering onboarding actions when new EC2 instances launch), and IAM and Secure Token Service (for managing permissions to AWS resources belonging to different accounts).
- Presented a demo showcasing how replication latency and data convergence could be affected following attacks on global table service components responsible for replicating DynamoDB items between several AWS regions.
- Gained exposure to Bash and Perl scripting languages as well as various Linux system processes and commands through analysis of attack scripts that simulated network latency, process suspension, and entirely consumed memory, disk space, and CPU.

The Home Depot Technology Center

Software Engineer Intern, Dynamic Recommendations API Team

Jan – April 2019

- Utilized React JS and Spring Boot Framework to add a file upload and parse component to internal recommendation model creation tool. Uploaded files would be parsed for item IDs that were to be either whitelisted or blacklisted depending on the type of model.
- Modified backend JSON responses for the dynamic recommendations API to return additional metadata concerning the recommendation model used.
- Wrote integration tests to verify orchestration between Cassandra Database (for storing catalog item information) and backend server responses.

PROJECTS

Jumble

Feb – May 2019

- Project with Texas Convergent to create a voice automated juice mixer prototype using Arduino and AWS.
- Created an Alexa skill for recognizing particular voice commands that could trigger an AWS Lambda function for reading from a drink recipe database as well as updating a channel that an Arduino device could read from

Timeline

June – Aug 2017, Jan 2019

- Swift mobile history visualization application allowing users to input historical events and images to create color coordinated timelines with a seamless background collage
- Incorporated Realm Database for offline data storage, iOS filesystem for image blob storage, and Google Palette API for capturing dominant colors in images

ACTIVITIES

Freetail Hackers – Tech Team Organizer

Jan 2018 – Present

- Implemented an OAuth framework to allow external websites to pull data from PostgreSQL user registration database
- Created frontend webpage for showcasing hackathon artwork using HTML, CSS, JavaScript, and HandleBars JS
- Helped modify backend Flask server for online hackathon registration system