

EXPERIENCE

Microsoft

Software Engineer II · Microsoft AI

Redmond, WA

March 2024 - Present

- **Current role:** still doing near-real-time event (big data) processing, delivery, and storage for microsoft.ai/product/ads

Software Engineer · Microsoft Ads Audience Infrastructure

July 2022 - February 2024

- **Built and maintained data pipelines for streaming and batch ingestion and processing:** Designed, implemented, and maintained near-real time features for audience targeting, personalized recommendations, and ads conversions calculations using **Apache Kafka**, **Apache Flume**, **Kafka Streams**, and **Azure Event Hubs**. Leveraged **Azure Cosmos DB** as distributed data store and **Azure Data Factory** as data pipeline for offline data.
- **Drastically improved system stability and live-site quality for customers:** Enhanced cluster health to uphold high-throughput/high-availability, tuned alert thresholds, wrote validation scripts, and collaborated with partner teams across multiple time-zones. Delivered knowledge sharing sessions, overhauled documentation website, and refined monitoring dashboards. Did cluster monitoring, performance tuning, and resource management.
- **Responsible for data governance and privacy compliance:** Managed consumer access control, data catalog, data lineage, and auditing.

Amazon

Software Development Engineer Intern · Promotions Platform

Seattle, WA

June 2021 - Sept 2021

- **External Promotional Code Management Service:** Upgraded outdated Tier-1 service: developed full-stack application using **RESTful APIs**, **Spring MVC**, **React.js** (front-end), **Java**, **MySQL RDS**, and **Amazon S3** (backend), to add new features to the system underpinning promotions for digital, retail, and physical-store orders worldwide.
- **Overhauled error-prone synchronous storage system:** Designed and implemented **SQS-invoked AWS Lambda** function to asynchronously persist promo codes to **Dynamo DB** using **AWS Cloud Development Kit (Infrastructure as Code)**, mitigating poison messages and allowing 750,000 more promotions to be processed per day.

Amazon

Software Development Engineer Intern · Seller Debt Control

Remote

June 2020 - Sept 2020

- **Developed new microservice that saved 5.1k hours a year through automation:** Leveraged AWS services: **EC2**, **Auto Scaling**, **Cloudwatch**, **DynamoDB**, **Docker**, **S3**, **Lambda**, **VPC**, and **CloudFormation**. Designed Data Access Objects for persisting objects to DynamoDB database.
- **Built a native AWS application from scratch:** Automated block & reinstatement actions on fraudulent sellers with workflows triggered asynchronously by account charge rate. Configured **Ruby** and **Typescript** infrastructure pipelines, created a service model for the new API, and established cross fabric connectivity.

Amazon

Software Development Engineer Intern · Seller Debt Control

Seattle, WA

June 2019 - Sept 2019

- **Merchant Debt Recovery Investigation Dashboard:** Built internal dashboard tool for merchant debt recovery investigators to automate process of writing annotations (1000 manual repetitions/week). Wrote unit+integration tests; resolved package dependency conflicts; managed CI/CD pipelines. Developed UI using **Java Server Pages**, **Spring MVC**, **JSON**, **Jquery**, and **AJAX** calls.

PROGRAMMING SKILLS

Languages: Java , C Sharp , Python , JavaScript , Windows PowerShell , SQL , C , C++ , Go , Lisp , Prolog , R , Bash
Technologies: Apache Kafka message queue , Apache Flume , NoSQL/Azure Cosmos DB , Azure Data Factory , Azure Event Hubs , AWS , UNIX/Linux , Vim , JUnit , Mockito , React , Sass , LaTeX , Git , x86 Assembly

EDUCATION

University of California, Davis

Bachelor of Computer Science; GPA: 4.0 (Dean's Honor List every quarter Fall '18 to Spring '22)

Davis, CA

Sept 2018 - June 2022