

Muhammad Alvi

muhammadalvi24@gmail.com | +1 647-705-3925

[github](#) | [linkedin](#)

EDUCATION

Bachelor of Computing

University of Guelph

Sep 2017 - Apr 2022

Guelph, ON

SKILLS

Programming Languages Java | Python | C | JavaScript

AWS Cloud Services EC2 | ECS | CloudWatch | IAM | SQS | S3 | DDB | Lambda | Kinesis | RDB | Athena | VPC

Frameworks/Libraries Docker | React.js | Google Guice | Git

EXPERIENCE

Amazon Web Services

Jan 2022 - Present

Software Engineer

Toronto, ON (Remote)

- Lowered monthly compute costs by 26% by migrating the entire EC2 fleet to AWS ECS utilizing docker containers
- Reduced wasteful computation by 17% by implementing a time-cutoff and byte-cutoff on problematic long-running tasks
- Increased monthly revenue by 34% by launching an autonomous content sampler that displayed potentially vulnerable AWS S3 buckets to customers and up-sold further classification as a result.
- Ran load tests to quantify performance thresholds which provided stakeholders crucial insight to formulate Macie's pricing calculation for content sampling service before announcing at AWS re:Invent
- Led a campaign to maintain an excellent standard of operational hygiene by creating command-line tools to assist in ticket analysis and mitigation
- Attached a security testing approval workflow to CI/CD pipeline, maintaining a rigorous standard of authorization and authentication testing
- Designed an allow-listing service that allows customers to provide custom regex to filter out irrelevant sensitive data discoveries, providing relief to Macie customers' heaviest pain points

Amazon Web Services

May 2021 - Aug 2021

Software Engineer

Vancouver, BC

- Held the sole responsibility for expanding Macie, a machine learning AWS Service that classifies sensitive information in text-based files to also include JPEG and PNG files
- Utilized MMOCR, a deep learning OCR library to facilitate extraction and classification of text maintaining an F-Score requirement of 0.9
- Wrote a design document outlining the business opportunity for image classification, offering a prospective project architecture, and detailing the quantitative success criteria
- Provided a complete test suite to enable integration into Amazon Macie and sequentially deploy into production
- Maintained a performance requirement of classifying 1.4 million images per hour

Scotiabank

Sep 2019 - Dec 2020

Software Engineer

Toronto, ON

- Designed a web-based test suite for 3 test environments using React and Spring, leading to 21% faster testing
- Developed a simulator for testing and monitoring multiple APIs providing 78% code coverage
- Automated reformatting of test data using Python scripts
- Deployed a Java-based international money transfer application
- Built a dashboard to track API metrics, invoke alarms, and provide insight to business owners for future improvements

NOTABLE PROJECTS

Virtual Financial Assistant - Winner Of Scotiabank Intern Hackathon

Dec 2019

Full Stack Developer

Toronto, ON

- Independently built an open-source chat-bot that ingests a monthly expenses sheet and outputs crucial financial insights to a customer. Utilized JavaScript/React to create a materialistic and modern UI that integrated the Scotiabank theme
- Used Python/Flask and Google's Natural-Language-Processing library to develop a feature that takes free-form sentences regarding customer points of concern in their finances, and outputs answers based on a statistical analysis of customers' spending habits
- Wrote a one-paged design document afterward to indicate potential integration of the virtual chat-bot into the Android/iOS Scotiabank application