

# Akbar Zafar

416-873-8797 | m27zafar@uwaterloo.ca | AkbarZafar | in akbarzafar

## Skills

**Languages** C, C++, Golang, Java, JavaScript, Python, SQL

**Tools** Angular, AWS, Docker, Kubernetes, Git, Linux, PostgreSQL, React Native

## Work Experience

### BioRender

May 2022 - Aug 2022

SOFTWARE DEVELOPER | TYPESCRIPT, AWS.

- Restructured the payments workflow by employing stripe to support additional payment methods
- Leveraged AWS CDK to develop infrastructure as code, saving \$14,000 USD annually in overhead expenses
- Strengthened the security of the application, by implementing the principle of least privilege for EC2 security groups
- Improved observability by implementing dashboards for multiple core services improving mean time to recovery

### SAP

Sept 2021 - Dec 2021

CLOUD INFRASTRUCTURE DEVELOPER | PYTHON, GOLANG, AWS, KUBERNETES.

- Implemented a customized Kubernetes management engine to execute pipelines over distributed clusters
- Restructured the main CI/CD pipeline from Jenkins to Argo Workflows parallelizing independent scheduled jobs
- Resolved multiple resource availability edge cases during cloud database cleanup
- Replaced the deprecated internal database management system with the current industry standard

### Kaleidescape

Jan 2021 - Apr 2021

SOFTWARE ENGINEER | JAVA, JAVASCRIPT, FFMPEG, AND POSTGRESQL.

- Leveraged FFMPEG to develop async tools providing image stats of a specified frame in a real-time dashboard
- Integrated a custom MXF/MP4 image-differencing algorithm with region selection for further analysis
- Optimized transcoding pipeline by allowing shorter transcodes reducing operations team idle time by 99%
- Developed an environment for applying and previewing custom filters with visualized breakdown of color spaces

### University of Ottawa

May 2020 - Aug 2020

SOFTWARE DEVELOPER | APACHE SLING (JAVA), ANGULAR (TYPESCRIPT), AND POSTGRESQL.

- Migrated Selenium tests to Protractor using page object methodologies improving test time by 60%
- Created a landing page customization feature to support white labeling increasing customer engagement
- Introduced a region dashboard utilizing a REST API allowing customers to manage their personal regions
- Refactored API endpoints in Java and implemented unit tests to improve readability

## Projects

### Image Concatenator

An image concatenator application

- Leveraged the cURL library in C to pull remote images and merge raw pixel data with adequate compression/decompression algorithms
- Parallelized the procedure using multiple threads with shared memory synchronized through mutexes.

### PricePoint

**WINNER FOR BEST UIPATH AUTOMATION HACK**

A web application to find the best deals for products

- Developed a custom web scraper to retrieve best sellers from e-commerce websites by leveraging UiPath automation
- Designed a user-focused Frontend with Bootstrap and handlebars.js for a reactive UX

### Explorer Quest

Strategic turn based game on Android

- Created a turn based strategic game in Java on Android with an intuitive UI
- Responsive GUI using animated sprites to streamline user experience

## Education

### University of Waterloo

Waterloo, ON, Canada

BACHELORS IN COMPUTER ENGINEERING

Sept 2019 - Apr 2024

Relevant courses: Compilers, Operating systems, Systems programming and concurrency, Data structures and algorithms