

Akbar Zafar

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Education

University of Waterloo

Waterloo, ON, Canada

BACHELORS IN COMPUTER ENGINEERING

Sept 2019 - Apr 2024

Relevant courses: Software design and architecture, Computer security, Compilers, Real-time operating systems, Systems programming and concurrency, Data structures and algorithms

Work Experience

Arctic Wolf

Jan 2023 - April 2023

SOFTWARE ENGINEER INTERN | REACT(TYPESCRIPT), GOLANG, PYTHON

- Implemented end-to-end support for selection of new sensor options for a more tailored customer experience
- Enhanced team productivity by automating the customer onboarding process, eliminating manual entry
- Improved test coverage by 80% through unit and integration testing, enhancing code quality and maintainability

BioRender

May 2022 - Aug 2022

CLOUD INFRASTRUCTURE DEVELOPER INTERN | TYPESCRIPT, AWS

- Restructured the payments workflow by integrating the Stripe API enabling support for additional payment methods
- Migrated existing infrastructure to AWS by leveraging AWS CDK, saving \$14,000 USD annually in overhead expenses
- Enhanced application sustainability with EC2 security policies and data visualization dashboards for core services

SAP

Sept 2021 - Dec 2021

CLOUD DEVELOPER INTERN | 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 by parallelizing independent scheduled jobs
- Repaired the database purging service by addressing key resource availability bugs improving product sustainability

Kaleidescape

Jan 2021 - Apr 2021

SOFTWARE ENGINEER INTERN | JAVA, JAVASCRIPT, FFMPEG, POSTGRESQL

- Leveraged FFMPEG to develop async tools providing image statistics of a specified frame in a real-time dashboard
- Optimized the transcoding pipeline by allowing shorter transcodes reducing operations team idle time by 99%
- Developed an end-to-end custom image-differencing algorithm and region selection in an analytical dashboard

University of Ottawa

May 2020 - Aug 2020

SOFTWARE DEVELOPER INTERN | JAVA, ANGULAR (TYPESCRIPT), 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

Projects

Genie Vision Tool | Python, OpenCV, YOLOV5

- An AI-powered smart vision tool that processes live visual data to produce audio feedback empowering visually impaired individuals with enhanced perception of their surroundings.

VHDL Compiler 📄 | Java

- Created a compiler for the VHDL programming language featuring the interpreter and visitor design patterns

Tracktor 📄 | Kotlin, Firebase

- A comprehensive Android app easing management for farmers with speech-to-text recording, offline functionality, analytics dashboard, multi-user collaboration, and progress tracking for streamlined farm management

Image Concatenator | C

- created an image concatenator application to concatenate remote images in parallel using multiple threads and synchronized shared memory through mutexes

Skills

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

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