

Amine Maalej

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WORK EXPERIENCE

Recollective

DevSecOps Engineer - Full Time - Remote

Ottawa, ON

April 2023 – Current

- Supports a team of 10 software engineers with cloud access, local environment set-up and network issues.
- Manages and oversees permission settings for engineers, maintaining Recollective's cloud security.
- Identified and resolved various findings detected in Vanta leading to a successful achievement of SOC2 compliance Type 1.
- Developed and maintained cloud environments through infrastructure as code using mainly CDK Typescript.
- Created Jenkins CI/CD pipelines, streamlining the building of application images and their delivery to ECR.
- Contributed to a migration project to segregate Development and Production environments into separate AWS accounts.
- Fixed the company's existing Production Network (NAT) in alignment with AWS Health Event guidelines, enhancing overall network efficacy.
- Identified and resolved numerous errors in GPU media services due to CUDA memory shortages, enhancing system stability.
- Engineered a Backup and Restore disaster recovery solution for Recollective main application, significantly enhancing system resilience and reliability.
- Designed a network diagram to illustrate the network topology.
- Created a control flow diagram to provide a clearer view of the security group flow in ECS, EB, and EKS services.
- Developed multiple CI/CD DevOps ad hoc pipelines to automate daily tasks.
- Developed and automated security scanning reports and streamlining the process of uploading security scan results to DefectDojo.
- Created a pre-commit hook for secret scanning and integrated GitLeaks into the CI pipeline.

Key Contributions:

- Led a project implementing a cross region call for an ECS service resulting in 15% cost savings.
- Devised a unique model caching solution leveraging EFS, reducing application startup time by 7 minutes and decreasing downloads by 8GB, improving overall performance.
- Implemented vulnerability detection in Docker images using Trivy, and carried out remediation to address identified security issues, reducing overall CVE by 35%.
- Pioneered a dynamic and scheduled auto-scaling solution for a media service, leading to a 18% cost savings and ensuring peak hour capacity was consistently met.
- Conducted various experiments on milvus, a vector database hosted in EKS to enhance its availability and performance.
- Prepared onboarding documents for new hires to facilitate knowledge sharing and ensure a smooth transition into their roles.
- Identified and resolved various vulnerabilities detected in Vanta.
- Reduced network costs by 25% and significantly boosted the overall performance of the EKS cluster by implementing S3 Access Points.

Tools : AWS - CDK Typescript - Jenkins - Docker - Kubernetes

Rewind

DevOps Engineer - Full Time - Hybrid

Ottawa, ON

January 2022 – March 2023

- Developed and maintained cloud environments through infrastructure as code using Terraform.
- Designed and implemented an auto scaling solution for Redis to streamline manual maintenance processes and minimize on-call intervention for production incidents.
- Led incident SEV1 response and postmortem analysis, identifying root causes and implementing preventive measures to avoid future occurrences. (24/7 on-call rotation).
- Ensured security and compliance standards were upheld according to best practices through continuous monitoring and routine audits.
- Maintained and updated RDS databases, OpenSearch and Redis clusters to ensure compliance with security best practices and standards.
- Regularly updated internal documentation and knowledge base to ensure consistency and accuracy of information.

- Created a Route53 backup solution to simplify deploying new resources and prevent loss of critical information.
- Applied a security patch procedure for the company VPN server to minimize security risks and ensure performance and compliance.

Key Contributions:

- Migrated an existing infrastructure from ElasticBeanstalk to Elastic Container Service, resulting in a 20% cost reduction and increased scalability.
- Developed a solution using CrowdSec to protect a service SSH endpoint from DDoS attacks, reducing the number of security incidents by 20%.
- Created and presented technical demonstrations to the R&D department, connecting implemented DevOps techniques to key business objectives..
- Reduced multi-region disaster recovery RTO for a central service by 50% by implementing pilot light disaster recovery, resulting in a 15% increase in system availability.
- Integrated Checkov into our IaC code analysis to avoid misconfiguration and capture any infrastructure bad practices, resulting in a 18% increase of the security posture.

Tools : AWS - Terraform - Github Actions - Docker - Python

Freedom of Dev

Software Engineer - Full Time - Onsite

Sfax, Tunisia

January 2020 – December 2020

- Designed and implemented a web scraper and web crawler to extract phone numbers from multiple online data sources, ensuring accurate and efficient data collection.
- Built a custom NER model using PyTorch to evaluate the confidence level of collected phone numbers data, streamlining the process of data validation and enhancing overall data quality.
- Improved the NER model performance by hyperparameter tuning, resulting in a substantial increase in precision (89%) and recall (72%) rates, thus enabling more accurate and efficient data analysis.
- Deployed the end-to-end solution in a serverless architecture using AWS.
- Developed a large scale, customer-facing web application that saw a 45% increase in user engagement, using React JS and Redux.
- Used spring framework for integrating the MVC components with business services.
- Implemented a micro service architecture with Spring boot interacting through a combination of REST and Apache Kafka message brokers, and handled the security using Spring Security.

Tools : AWS - Spring Boot - React - PyTorch - Docker

CERTIFICATIONS

- AWS Certified Developer – Associate
- AWS Certified SysOps Administrator – Associate
- AWS Certified Solutions Architect – Associate
- LPI : Linux Essentials Certification
- HashiCorp Certified: Terraform Associate
- AWS Certified Cloud Practitioner
- TCF Canada (Test de connaissance du français) B2
- IELTS (International English Language Testing System) C1

EDUCATION

University of Sherbrooke

Specialized Graduate Studies Diploma in Software Engineering (GPA: 3.72/4.3) January 2021 - December 2021

Sherbrooke, QC

- Deep Learning
- Cyber Security

International Institute of Technology

Bachelor's Degree in Computer Science (GPA: 17.37/20)

Sfax, Tunisia

September 2017 - September 2019

- Software Development
- Cloud Computing

VOLUNTEER

Guest presenter to educate software engineering students at the International Institute of Technology in Tunisia on Infrastructure as Code (Terraform) - Sponsored by Rewind