MOHAMED ZOUARI

Senior Software Engineer

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SUMMARY

*Senior Software Engineer with **more than 4 years** of experience designing and managing large-scale cloud infrastructures using AWS, Kubernetes, and Terraform. **2xAWS Certified**, proficient in Python, Go, and CI/CD automation.*
Working on optimizing software development processes and enhancing system performance.

TECHNICAL SKILLS

Programming Languages:	Python, Go, SQL, Java, C/C++.
Cloud Providers:	AWS.
Databases:	SQL, MongoDB, PostgresQL, Oracle.
Automation Tools:	Kubernetes, Docker, Terraform, Ansible, SaltStack, Jenkins, Gitlab CI/CD.
Monitoring and visualization:	Dynatrace, Kibana.

CERTIFICATIONS

AWS Certified Solutions Architect – Associate - Credentials *Feb 2023*
AWS Certified Developer – Associate - Credentials *Dec 2021*

EXPERIENCE

SAP | Senior *Software Engineer* *Jul 2022 – Present*

Large-Scale Collector Application Deployment with AWS EKS:

- Deployed a large-scale Collector application to AWS EKS.
- Integrated dynamic Kubernetes components, increasing scalability to handle up to 2TB of data per day.
- Achieved an 80% reduction in downtime, boosting system reliability and performance.

Dynatrace Database Collector Development:

- Engineered a custom SAP HANA Collector for Dynatrace, leveraging Python and SQL to extract crucial metrics and metadata necessary for server-side database monitoring.
- Collaborated closely with two architects to design the Collector using the OpenTelemetry framework. This involved developing a robust Python-based application integrated with SQL queries.
- The collector application led to an increase in data acquisition and integration into Dynatrace by 70%. This enhancement enabled comprehensive visualization and analysis of database-specific resource metrics over time, empowering operators to proactively monitor performance and ensure optimal system stability.

Migration from AWS CloudFormation to Terraform:

- Replaced existing AWS CloudFormation infrastructure with streamlined Terraform scripts for 30+ resources.
- The migration to Terraform led to the creation of an agile, scalable, and multi-cloud-ready environment, resulting in a 40% boost in deployment efficiency.

Enhancement of Jenkins Pipelines:

- Optimized several Jenkins pipelines, ensuring quality outputs and improving operational efficiency.
- Pipeline improvements led to higher productivity and a 95% success rate in stable executions, significantly enhancing the delivery of reliable outcomes and ensuring consistent performance.

Enhancement of multiple Kibana Dashboards:

- Refined various Kibana dashboards and alerts to enhance user experience and efficiency.
- Edited dashboards and made necessary modifications focusing on user friendliness and overall usability.
- As a result of the refinement, there was an improvement in user efficiency, leading to a 50% quicker response time in the alerting system, thereby significantly improving the system's overall effectiveness.

Infor | *Software Development Engineer* *Sep 2020 – Jul 2022*

Creation of a python CLI to upgrade deployment workflows:

- Developed a Python CLI utility for generating deployment files, reducing manual errors by 30%.
- Automated packaging and uploading to S3 via GitLab CI, reducing deployment time.
- Improved efficiency and lifecycle of Infor Nexus products by implementing automated deployment processes.

Designed and Implemented the automation to deploy a new multi-tier project on a cloud-based infrastructure:

- Implemented automation for a 3-tier application deployment on AWS using Terraform and rolled out SaltStack scripts for efficient configuration of remote compute nodes.
- The successful delivery of the project brought about complete automation of deployment and smooth cross-account access, enhancing overall operational efficiency.

Integration Objects | *Software Development Engineer* *Feb 2020 – Jul 2020*

Designed and Implemented a Monitoring Module for a Large-Scale Industrial IoT Platform:

- Implemented a Python microservice module for monitoring a distributed and large-scale industrial IoT platform.
- Designed a microservice that collected and managed exposed metrics and data through the use of scheduled jobs. This microservice was then deployed on a multi-server Kubernetes cluster for optimal performance.
- Improved the ability to monitor and manage the high-scale IoT platform, providing invaluable data insights and elevating our understanding of system performance.

SELECTED INDIVIDUAL PROJECT (More projects available on my **portfolio website**)

EagleEye | Monitoring Real-Time Reputation Tracking on Twitter *Jul 2019 - Sep 2019*

- Created a real-time tool for tracking social media reputation on Twitter using a microservice architecture.
- Integrated Python modules for sentiment analysis and stream processing to enable real-time analysis of Twitter data. Utilized Kafka as a message broker for seamless stream processing and Elasticsearch for storing processed results. Deployed the platform on an AWS EC2 instance.
- Demonstrated effectiveness by accurately predicting election outcomes with an 87% success rate during the 2019 Tunisian Presidential Election. Improved understanding of public sentiment on social media, facilitating efficient prediction and strategic decision-making.

Lemhaf | Connective Services Sharing Online Platform *Mar 2021 - Present*

- Developed a comprehensive, full-stack web platform to bridge the gap between service seekers and providers. The platform allows for easy discovery of various daily services for users and enables service providers to connect effectively with their target community.
- Designed a three-tier architecture using Node.js as the backend, MongoDB as the database, React.js for the frontend, and integrated a private CDN to host media.
- Developing a recommendation engine for services, expected to increase user engagement by 40%, enhancing platform efficiency and convenience.

EDUCATION

Paris Descartes University, Paris, France Sep 2019 - Sep 2020
M.Res, Computer Science
Master of research degree M2, Computer Science with a major in Signal Processing.

National Engineering School of Tunis, Tunis, Tunisia Sep 2017 - Jul 2020
M.Eng.CS, Software Engineering
Master's degree in Computer Science with a major in Software Engineering.

Preparatory Institute El Manar, Tunis, Tunisia Sep 2015 - Jun 2017
B.Sc, Mathematics and Physics