MOHAMED ZOUARI

Software Engineer

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SUMMARY

DevOps Engineer with 4 years of experience in designing, building, and managing large-scale cloud infrastructures. 2x AWS Certified (SAA-C03, DVA-C01). Passionate about using cloud computing to improve the software development experience.

TECHNICAL SKILLS

Programming Languages:	Python, Java, Javascript, C/C++.
Cloud Providers:	AWS.
Databases:	SQL, MongoDB, PostgresQL, Oracle.
Operating Systems:	Unix/Linux, macOS.
Automation Tools:	Terraform, Jenkins, SaltStack, Ansible, Kubernetes, Gitlab CI/CD.
Monitoring and visualization applications:	Dynatrace, Kibana.

EXPERIENCE

SAP, *Jul 2022 – Present*

Software Development Engineer

- Designed and implemented an automation to deploy a collector application on AWS EKS:
  - Optimized microservices deployment workflows using AWS EKS, achieving significant improvements in deployment speed, scalability, and high availability.
  - Implemented advanced Kubernetes features, such as self-healing, automated rollbacks, and zero-downtime updates, to enhance system resilience.
  - **Results:** Achieved important improvements in system performance, contributing to a reduction in downtime and ensuring consistent service reliability.
- Developed a database collector for Dynatrace, a data collection solution designed to fetch metrics and metadata from SAP HANA database for comprehensive server-side database monitoring:
  - Collaborated with a team of architects to conceptualize, design, and implement the SAP HANA Collector, ensuring seamless data retrieval and integration with Dynatrace. The collector is built on the concept of the OpenTelemetry Collector, utilizing Python and SQL.
  - **Results:** Enhanced monitoring capabilities through a custom-built Dynatrace dashboard, enabling real-time data visualization and analysis to optimize system performance.
- Orchestrated a strategic migration from AWS CloudFormation to Terraform for an internal project:
  - Designed and implemented Terraform scripts to replace existing CloudFormation templates, ensuring idempotent and repeatable deployments, while also introducing modular and reusable code.
  - **Results:** Established a more agile environment to support future scaling and cross-cloud integrations.
- Designed and enhanced multiple Jenkins pipelines:
  - Developed pipelines for configuration, testing, and deploying applications.
  - Scheduled the pipelines to run at specific intervals, ensuring consistent and reliable executions.
  - Added alerts to inform the team about the pipeline outcomes, sending updates to dedicated channels.
  - **Results:** Productivity and efficiency were enhanced.
- Enhanced several dashboards in Kibana:
  - Identified areas for improvement in existing dashboards, alerts and implemented changes to increase usability.
  - **Results:** Increased the effectiveness of alerting and response to potential issues.

Infor *Sep 2020 – Jul 2022*

Software Development Engineer

- Contributed to the design and the implementation of a (Python) CLI utility to manage and generate automatically the deployment workflows as a layer on top of an internal deployment tool:
  - Added package process using a GitLab CI, to build and publish the project built artifact to an AWS S3 bucket.
  - Created an update feature to get the latest shared version from the S3 bucket and promote it from CLI.

- **Results:** Improved the lifecycle of all the deployed products. The team reached a more efficient working cycle.
- Designed and Implemented the automation to deploy a new multi-tier project on a cloud-based infrastructure:
  - Automated 3-tier application deployment with Terraform, boosting deployment speed and consistency.
  - Introduced reusable Terraform modules, reducing code duplication and improving maintainability.
  - Implemented SaltStack scripts to fully configure the remotely created compute nodes.
- Designed a new release of an internal platform for a multi-environment support and cross-account availability :
  - Designed and implemented an integration environment, refreshed from CI pipeline stages to redeploy the application servers and trigger a lambda function that refreshes the load balancer target groups.
  - Designed and implemented a temporary feature testing environment to enable developer testing newly implemented features from a code branch.
  - Exposed the platform via a custom endpoint service and AWS PrivateLink to other VPCs in external accounts.
  - **Results:** Achieved full deployment automation, enabling seamless cross-account access.

Integration Objects *Feb 2020 – Jul 2020*

Software Development Engineering Intern

- Designed and implemented a monitoring module for a distributed and large-scale industrial IoT platform:
  - Implemented a microservice to collect and manage remote exposed metrics, data, using scheduled jobs.

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

EagleEye *Jul 2019 - Sep 2019*

A real-time solution for reputation tracking and monitoring on Twitter

- Designed and developed a real-time reputation tracking and monitoring solution using a microservice architecture.
  - Implemented back-end microservices leveraging Spring Cloud to ensure scalability and reliability.
  - Developed sentiment analysis microservices and stream processing modules using Python to analyze Twitter data in real-time.
  - Integrated Kafka as a message broker to facilitate seamless stream processing across running containers.
  - Integrated Elasticsearch as a high-performance search engine to store stream processing results, enabling real-time dashboard monitoring.
  - Successfully deployed the platform on an AWS EC2 instance.
  - **Results:** Successfully provided real-time reputation comparisons of two candidates during the Tunisian Presidential Election, demonstrating system reliability and effectiveness, with results closely aligning with the actual outcomes.

Lemhaf *Mar 2021 - Present*

A services sharing online platform

- Created a full-stack web platform, to allow users find out daily services they need and to allow service providers to connect with the community :
  - Designed, and implemented a three-tier architecture for a cross-platform online sharing website.

EDUCATION

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.

Paris Descartes University, Paris, France Sep 2019 - Oct 2020

M.Res, Computer Science

Master of research degree M2, Computer Science with a major in Signal Processing.

Preparatory Institute El Manar, Tunis, Tunisia Sep 2015 - Jun 2017

B.Sc, Mathematics and Physics

CERTIFICATIONS

AWS Certified Solutions Architect – Associate Credentials *Feb 2023 - Feb 2026*

AWS Certified Developer – Associate Credentials *Dec 2021 - Dec 2024*