MOHAMED ZOUARI
Software Engineer

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SUMMARY

Forward-thinking Software Engineer with a background working effectively in a dynamic multi-national enterprise environment. Fluent in Python, with a good understanding of data structures, algorithms, design patterns and software paradigms. Love to work on challenging projects. Pay attention to the details.

TECHNICAL SKILLS

Programming Languages:	Python, Java, Javascript, C/C++.
Databases:	SQL, MongoDB, PostgresSQL, Redis, Oracle.
Tools:	SaltStack, Ansible, Celery, RabbitMQ, AWS, NodeJs, NGINX, Nix.
Operating Systems:	Unix/Linux, Windows.
Software Design & Methodologies:	Web Services, REST, MVC, MVP, Testing, Agile, KANBAN, SCRUM, TDD.

EXPERIENCE

Infor   *Sep 2020 – Present*
Software Development Engineer

- Contributed in 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. (Currently the maintainer) :
  - Designed with a team of experienced cloud developers the new concept of workflow as collection of deployments and test actions associated with a specific AWS deployment environment.
  - Implemented the CLI generation tool to use generic config files to create workflows in a customizable way.
  - Results: Improved the lifecycle of all the deployed products. The team reached a more efficient working cycle.
- Contributed in the enhancement and the creation of new features for internal platform that manages cloud environments :
  - Updated the API layer (Python Pyramid) and the task processing side (Celery, RabbitMQ, SQLAlchemy).
  - Participated in debugging and optimizing code.
  - Packaged the application using Nix and deployed it using Infor tools.
- Led a prototype to move the platform mentioned above to be more serverless :
  - Led a team of 2 developers under the guidance of a vice-president, a manager and a principle site reliability engineer; tracking progress, reviewing pull requests and making demos.
  - Developed and migrated the API layer on top of (AWS API Gateway) and adding (AWS lambda function) for different use cases.
  - Results: Reduced the deployment **cost** by 17%.
- Implemented the automation to deploy a new multi-tier project on a cloud-based infrastructure on top of the internal deployment tool :
  - Designed, analyzed, and troubleshooted a new large-scale distributed system with the DevOps/SRE practices.
  - Wrote SaltStack script to fully configure the remotely created compute nodes.

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, devices, using scheduled collection job actions (ASP.NET Core).
  - Set rules to scale up or to scale down running instances on a private cluster.
- Created an automated cluster installer (vagrant) to setup a multi-node and multi-machine cluster using a configuration management tool (ansible) on physical connected machines.

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

Lemhaf | RUNNING, Deployed on lemhaf.tn   *Mar 2021 - Currently Maintaining*
The first Tunisian services sharing online platform
- Created a full-stack web platform, to allow users find out 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.
  - Implemented a responsive front-end UI (ReactJS, Ant Design, Material Design).
  - Deployed a back-end server (NodeJS, ExpressJs), connected with a non relational database (MongoDB).
  - Used a distributed storage cloud solution to host media files.
  - Implemented an authentication and authorization component with email verification.
  - **Results:** Actually Running, with (860 users, and 1540 shared services).
  - *Actually working on adding a service recommendation engine based on services rating and user previous activity.*

EagleEye | Github Repo | Demo   *April 2019*
A real-time reputation monitoring platform
- Designed and implemented a real time solution for reputation tracking and monitoring on (Twitter) :
  - Designed and implemented a microservices solution.
  - Implemented some back-end microservices using (Spring Cloud).
  - Implemented sentiment analysis microservices and stream processing modules (python).
  - Used Kafka as a message broker to handle stream processing between the different running containers.
  - Used Elasticsearch as a search-engine to save the streams processing results for a realtime dashboard monitoring.
  - **Results:** Deployed the platform on an AWS EC2 instance and tested it 3h before Tunisian Presidential Election results announcements to get a comparison of the reputation of the two candidates near the real results.

EDUCATION

National Engineering School of Tunis, Tunis, Tunisia   *Sep 2017 - Jul 2020*
M.Eng.CS, Software Engineering
Computer Science engineering degree (M.Eng equivalent) 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
Ranked among the top 5% nationwide in the national exam.

EXTERNAL ACTIVITIES

IEEE   *Sep 2017 - Present*
Active member
- Chairman of an IEEE Computer Society Chapter :
  - Organized training workshops covering competitive programming and problem solving.
  - Coach for the IEEEXtreme international 24h competitive programming competition.
- Participated in the CEuSYP, Central Europe student and young professional congress held in Serbia in 2019.
- Organized the TSYP 2019, Tunisian student and young professional congress.

ENIT Arts club   *Sep 2017 - 2020*
Chairman of the board
- Led a university music band as **the violinist** of the group, to participate in events.
- Managed the artistic side of engineering students.
- Organized different arts workshops (painting, music…) and flash-mobs.