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Languages:

Arabic: Bilingual
French: Advanced
English: Advanced

Tools / Software / Mastered Methods :

- Agile Method : SCRUM
- Python : Pandas, Pytest, Flask
- Cloud : Azure, AWS
- CI/CD : Terraform, Docker
- Database : PostgreSQL
- Linux, Windows, Bash
- Data: Databricks, Spark

Certifications:

- Databricks Certified Associate Developer for Apache Spark 3.0
- HashiCorp Certified: Terraform Associate (003)
- Cisco CCNA 1 & 2
- Networking in Google Cloud
- LINUX LPI-101 : 750/800
- TOEIC : 870/990

Dhiaeddine ALIOUI

Cloud / Data Engineer – Python Developer
4 years of experience

EXPERIENCE

SFEIR - LVMH Paris - France, December 2023 – Today
Cloud – Data Engineer

My mission involves developing data-centric modules that integrate Infrastructure as Code (IaC) using Terraform. I also use Python for code development, which I containerize with Docker for optimal portability. These modules are designed to be deployed on GCP. I create and document the architecture of these modules, ensuring clear understanding and efficient maintenance.

The technologies used for the project are: Terraform, GCP, Python, Go, Docker.

Celsius Energy – SLB (Schlumberger) Clamart - France, January 2022 – December 2023
Cloud – Data Engineer

The project aims to monitor the performance of geothermal installations in real-time, measure energy gains, and CO2 emissions, by processing and displaying data collected from control systems.

- Development of Python pipelines to automate sensor deployment and conduct energy audits.
- Development of Python IoT Hub modules that collect data from the geothermal installation control system and perform advanced calculations.
- Processing of collected data with Spark in Databricks and storage in Azure Storage Account.
- Development of the back-end of the Web application (Dashboard) displaying processed data in real-time using Python and Azure Function App.
- Automation of infrastructure deployment on Azure using Terraform.
- Documentation of deployed architectures using diagrams and visualization schemes.
- Rotating participation as Scrum Master to facilitate ceremonies, refine the backlog, and ensure communication and collaboration within the team.

Technologies used for the project are: Python, Pytest, Terraform, CI/CD, Docker, Databricks, Spark, Azure (IoTHub, Function App, Logic App, Service App, Storage Account, Stream Analytics, VNet, APIM).

Cloudeasier – part of Accenture Saint-Denis - France, August 2020 – December 2021
Cloud Engineer

Development of the Python backend for a multi-cloud invoice management web application (AWS, Azure, GCP, Alibaba) hosted on AWS. The application will centralize and visualize billing data from various cloud platforms used by the client, for better cost management and resource utilization.

- Development of data ingestion connectors for billing data from different cloud platforms.
- Optimization of SQL queries to reduce backend response time.
- Implementation of optimizations on client's cloud platforms (FinOps): VM and disk resizing, ASP pooling, and data and VM backup archiving.
- Creation of Python scripts for extracting metadata from resources deployed on the cloud.

Technologies used for the project are: Python, Pytest, ORM (Peewee), CI/CD, PostgreSQL, Terraform, AWS (SNS/SQS, Lambda Function, EC2, Fargate, CloudWatch), Azure (Storage Account, ASP, Azure VM, Function App, Service App), GCP (App Engine, Pub/Sub, Compute Engine).

Schlumberger Clamart - France, March – August 2020

Python Developer

Creation of a simulator for a seismic data acquisition system using a microservices architecture to study the scalability and performance compared to the already-used monolithic architecture.

The simulator includes data collection and processing microservices, a load balancer, a database, REST APIs, and a web server.

- Installation of a computing cluster comprising 13 Raspberry Pi 4 boards and setting up the environment, including network configuration and NFS storage configuration.
- Simulation of seismic data processing computation on the computing nodes.
- Implementation of a load balancer to distribute tasks across the computing nodes.
- Creation of a web server to initiate computation tasks, visualize their progress, and monitor the performance of each computing node.
- Creation of a database to store task progress-related data and monitoring data for each computing node.

Technologies used for the project are: Python, Nginx, Flask, Shell, PostgreSQL, Google Protobuf, HTML, CSS, JavaScript, NFS, and microservices.

EDUCATION

Graduate School and Research Center in Digital Science

EURECOM Sophia Antipolis - France, 2018-2020

Master Degree in Internet of Things (IoT).
Studies: IoT, Cloud Computing, Machine Learning, Data Science, Operating Systems.

Engineering School

Higher School of Communications of Tunis (SUP'COM) Tunis – Tunisia, 2016-2018

Engineering program in Information and Communication Technologies (ICT), double degree program with EURECOM.
Studies: Telecommunications, Computer Science, Networks

Preparatory cycle for engineering schools

Preparatory Institute for Engineering Studies El-Manar Tunis – Tunisia, 2014-2016

Specialty: Technology

PERSONAL PROJECTS

SVG to GCODE Converter

Development and deployment of a Python application for converting SVG images into executable GCODE for 3D printers. Using a pen holder, the 3D printer is capable of drawing the converted image.

- Creation of a Python module to convert SVG images into GCODE.
- Development of a web-based user interface allowing users to upload SVG images, modify various converter settings, and initiate the conversion process.
- Utilization of Azure services to host the application on the cloud using a serverless architecture.

Technologies: Azure (App Service, APIM, Function App, Vnet, Storage Account), Python, HTML, CSS, Vanilla JavaScript.