

# Hachem CHEAIB

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## Summary

Hello! I am Hachem Cheaib, a dedicated and passionate professional with a diverse background in Software Engineering, Data Science, and Artificial Intelligence. With over 4 years of experience, I have a track record of success in a variety of roles across different domains.

Currently, I work as a Software, Data, and AI Engineer at Sogeti, focusing on implementing innovative solutions. Simultaneously, I serve as a Career Manager where I support colleagues in their career development and growth.

Outside of my professional life, I am continually learning and expanding my skillset, with certifications in Google Cloud and a strong foundation in Artificial Intelligence, Machine Learning, and data processing.

I am enthusiastic about the future of technology and its potential to make a positive impact. Let's connect, collaborate, and explore the possibilities of the digital world together!

I am particularly interested in roles related to AI and Big Data development.

## Experience



### Software, Data, and AI Engineer

Sogeti

Jun 2021 - Present (2 years 6 months)

In addition to the fixed price projects and technical services and assistance, I oversee SogetiLabs – an innovation entity that touches the R&D using Artificial Intelligence solutions.

Missions' explication will be mentioned in the rest of the resume.



### Career Manager

Sogeti

Oct 2022 - Present (1 year 2 months)

As a Career Manager (CM), I do the following:

1. Employee monitoring
2. Mission tracking
3. Annual evaluation
4. Training requests
5. Establishing links between employees and the organization



### Software and AI Engineer

Sogeti

Jul 2023 - Present (5 months)

TNT (Talent Needs Trend), improve the synergy between skills, benchmarks and services for clients, while identifying possible cycles, weak signals and disruptions. Additionally, it aims to more effectively measure employee experiences and build loyalty through a job recommendation system based on various factors and an interactive satisfaction chatbot providing personalized advice to improve well-being and influencing recommendations future missions.

During my contribution, as tech lead, my responsibilities focused on the following areas:

Tech lead:

1. Monitoring the skills development of all collaborators in the Data team.
2. Technical support for developers and data scientists.
3. Feedback on tasks and projects.
4. Definition and implementation of good practices.
5. Collaboration with DevOps teams for technological choices.
6. Animation of daily meetings.

Software Development :

1. Design and development of an API using Python to facilitate data management and interaction with an Elasticsearch and Azure File Share clusters, with a focus on ease of use and traceability through detailed logs.
2. Creation of a batch script to deploy the data annotation tool "doccano" to annotators, thus optimizing the annotation process.

Data Science:

1. Establishment of a data annotation protocol, especially for textual data, to prepare high-quality data for training our artificial intelligence engine.
2. Take stock of the state of the art on data annotation platforms, guaranteeing the selection of a solution adapted to our needs.

AI:

1. Creation of notebooks to clean a corpus of textual data and choose a set of reliable data for training
2. Created notebooks to manage and interact with Elasticsearch and Azure File Share, contributing to the continuous improvement of our AI-related processes



## **Data Engineer**

**REALITES**

Oct 2022 - Jul 2023 (10 months)

On behalf of Sogeti

DOSII - PowerBI Platform, Migration and centralization of data to the Azure Cloud and implementation of a PowerBI Platform.

During this assignment, I played an active role in creating a Power BI dashboard. My involvement particularly stood out in the centralization of data in an Azure SQL data warehouse (DWH), through an operational area (ODS) meeting the client's needs. Here is a summary of my responsibilities:

1. Analysis of raw data to understand their structure and specificities.
2. Setting up data pipelines and flows to meet ETL needs using Azure Data Factory.
3. Ingestion of data from ETL processes into ODS areas and data warehouse (DWH).

4. Guaranteeing the quality of data and processing processes through rigorous validation.
5. Contribution to improving the Azure architecture to allow access to on-premises servers at the customer's premises.
6. Participation in the creation of Power BI reports for a visual presentation of data.
7. Development of technical documentation for the application, including technical specifications (STD) and physical data model (PDM).

## **Software Engineer**

La Poste Groupe

Jul 2022 - Oct 2022 (4 months)

On behalf of Sogeti

UTBK, "Sorting Intelligence" Application Domain

Designer and developer of an intermediate mail sorting library.

During this mission, I accomplished the following tasks to set up an intermediate Kafka producer to facilitate communication between the different levels of the solution and to allow the integration of new sorting machines.

1. Understanding of business cases and ability to translate them into functional cases (user stories).
2. Design of the application, including establishing detailed technical specifications (STD) and creating appropriate integration tests.
3. Development of a Kafka producer using the Java 8 language.
4. Creation of unit tests to guarantee the quality of the code developed.
5. Application of the Agile SAFe methodology to promote effective and iterative project management.
6. Complete technical documentation of the application to ensure clear traceability and understanding of how the solution works.

## **Data Scientist**

Sogeti

May 2022 - Jun 2022 (2 months)

Cortex AI

Reducing the training time of a deep learning model using the neural headset.

During this contribution, I undertook the following activities:

- Conduct in-depth research to understand methods for acquiring, processing and leveraging reliable EEG data for learning purposes, and deploy learning components in the cloud.

To achieve these goals, I accomplished the following tasks:

1. Taking User Stories into account to fully understand user requirements and needs.
2. Conduct the research necessary to be able to effectively exploit EEG data, identifying best practices and appropriate approaches.
3. Establishment of an EEG data acquisition protocol to guarantee their reliability and usefulness in the context of learning.

4. Deployment of learning components in the cloud to ensure optimal accessibility and scalability.
5. Active participation in the various events of the Agile ceremony, thus promoting a collaborative and iterative approach in the project.
6. Organization of round tables on artificial intelligence (AI), allowing discussions and sharing of expertise in this constantly evolving field.



## **Software Engineer**

Cnam

Aug 2021 - Apr 2022 (9 months)

On behalf of Sogeti

TMA and MCO on the Ameli Web Legacy Account application.

As a developer in TMA (Third Party Application Maintenance) and MCO (Operational Condition Maintenance) of the Ameli Web Legacy Account application, my mission was to carry out developments on the RESID and RFOS applications. Here is a summary of my responsibilities:

1. Consideration of User Stories to understand user requirements and development needs.
2. Development of solutions using Java Spring boot, Java Spring batch and Shell batch for data migration from Oracle to PostgreSQL, thereby contributing to effective data management.
3. Ensure developments are carried out and put into production to guarantee the proper functioning of the application.
4. Writing detailed technical specifications (STD), ensuring complete documentation of the solutions implemented.
5. Active participation in the various events of the Agile ceremony and in the V-Cycle processes, promoting collaborative and structured project management.



## **Data Scientist**

Sogeti

Jun 2021 - Jul 2021 (2 months)

Cortex AI

Reducing the training time of a deep learning model using the neural headset. A platform was created to retrieve data from a neural headset, store it and process it.

As part of a research and development (R&D) project carried out in agile mode within a hybrid team, I was responsible for setting up the life cycle of a data project. My goal was to apply the different steps needed to create machine learning models using EEG data. Here is a summary of my activities:

1. Taking User Stories into account to understand user needs and define the project's functionalities.
2. Handling of EEG data, including its collection, storage and preparation for analysis.
3. Processing EEG data to make them usable, by applying extraction, cleaning and transformation techniques.
4. Building machine learning models to analyze EEG data and generate meaningful results.
5. Evaluation of learning models to measure their performance and adjust them if necessary.
6. Active participation in the various events of the Agile ceremony to promote collaboration within the team.
7. Drafting of technical documentation to ensure complete traceability of the project.

8. Organization of round tables on artificial intelligence (AI) to promote exchanges and discussions around this area.



## **Software and Data Engineer**

### **MAO Conseil**

Sep 2020 - Feb 2021 (6 months)

- Big Data Developer
- Full stack development for a mobile application using React Native



## **Back End Developer Java / JavaEE**

### **UTBM**

Feb 2020 - Jul 2020 (6 months)

Development of a solution to optimize home caregiver tours

- Backend (Spring MVC, SpringBoot): JavaEE, Maven, Hibernate, JPA, MySQL
- Frontend: JSP, Angular
- Development of different functionalities
- Ensure the smooth running of the operation
- Implementation of a queue in the optimization process
- Carrying out unit tests
- Front end side intervention: Javascript and JSP
- Intervention on UX / UI
- Documentation



## **Machine Learning Specialist**

### **Laboratoire G-SCOP Grenoble**

Apr 2019 - Sep 2019 (6 months)

Evaluation of intrusion detection systems (IDS) for industrial control systems (ICS) using Machine Learning approach

- Simulation of different scenarios of cyber attacks on a control system industrial using an internal simulator
- Real-time data collection using a RESTful API, Python
- Handling, visualization and interpretation of collected data: Numpy, Pandas ..., Python
- Creation of supervised and unsupervised machine learning models Scikit-learn - Python
- Evaluation of different algorithms

## **Natural Language Processing Engineer**

Oct 2018 - Mar 2019 (6 months)

Web platform for analyzing Twitter speeches with the Jupyter notebook

- Retrieving tweets online based on specific hashtags
- Handling, visualization and interpretation of collected data: Numpy, Pandas ..., Python
- Implementation of NLP concepts using NLTK, Python
- Creation of a tweets data graph, Neo4J
- Implementation of graphic algorithms: Community detection, Centrality ...

- Implementation of NLP concepts using Cypher, Neo4J



## **Robotics Club Main Developer**

Université Antonine - UA

Sep 2016 - Apr 2018 (1 year 8 months)

Design and manufacture of a robot under specific criteria in order to participate in a robot competition organized by the VEX association.

The competition is based on knockout matches, each match is 2 minutes: 45 seconds autonomous robot and 75 seconds joystick control

- Programming of the robot's autonomous operation
- Preparation of joystick functions

## **Education**



### **Université de Bourgogne**

Master 2, Big Data and Artificial Intelligence

2018 - 2019



### **Université Antonine - UA**

Diplôme d'ingénieur, Informatique et Télécommunications

2014 - 2019

Génie logiciel et réseaux

## **Licenses & Certifications**



### **Professional Data Engineer - Google Cloud**

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## **Skills**

Artificial Intelligence (AI) • Data Science • Machine Learning • Object-Oriented Programming (OOP) • Research and Development (R&D) • Natural Language Processing (NLP) • Extract, Transform, Load (ETL) • Google Cloud Platform (GCP) • Microsoft Azure • Apache Spark

## **Honors & Awards**

### **Vex Robotics Competition tournament champion 2017/2018 - VEX Robotics**

Mar 2018

VexU Lebanon