

# KAIS BETTAIEB

Python Developer

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## 1. DEGREES

**2015-2020: Private Higher School of Engineering and Technology – ESPRIT-**

Software Engineer

## 2. TECHNICAL SKILLS

**Programming Languages:** Python 3, Javascript, Typescript

**Frameworks:** FastAPI, Flask, Pandas, Pydantic, Celery, ReactJs, TailwindCSS, Pytest

**Ops:** Docker, Rancher, Kubernetes, Jenkins, SonarQube

**Databases :** PostgreSQL, SQLAlchemy

**Tools:** RabbitMQ, Redis, Lens

## 3. PROFESSIONAL EXPERIENCES

**Since March 2024: Python Developer – Display Interactive**

**Context:** Contributed to the development of Skywaves®, a next-generation, software-defined connectivity platform designed to deliver high-speed satellite internet to commercial flights. The objective was to build a scalable, flexible infrastructure capable of supporting both LEO (Low Earth Orbit) and GEO (Geostationary Orbit) satellite constellations.

### Key Achievements and Responsibilities:

- Wrote detailed technical specifications and developed asynchronous APIs within a microservices architecture to ensure high performance and scalability of the connectivity platform.
- Designed and implemented robust unit and integration tests to guarantee system reliability and prevent regressions
- Collaborated with DevOps and QA teams to support production deployments and CI/CD processes using GitLab CI, Docker, and Kubernetes.
- Maintained and enhanced existing solutions, providing level 2 support, debugging complex issues, and resolving bugs in production environments.
- Contributed to the continuous improvement of development practices by managing technical debt, identifying performance bottlenecks, and enforcing clean, testable code.
- Interfaced with low-level hardware components, gaining hands-on experience with connectivity systems and handling challenges related to resilience and intermittency in embedded environments.

### Technologies Used:

Python, Pytest, SQLAlchemy, PostgreSQL, Sqlite, Asyncio, Celery, RabbitMQ, Redis, FastAPI, Flask, Uvicorn, Nginx, Gitlab CICD, Kubernetes, Lens, Docker, Vault.

### Delivery to Date:

The developed solution ensures in-flight connectivity through high-performance microservices, enabling reliable communication over satellite networks.

The system is currently in production, delivering stable and scalable internet access across commercial airline fleets.

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### **March 2021- February 2024: Python Developer - Société Générale**

**Context:** Participation in the development of tools aimed at optimizing and monitoring the operational costs of internal service offerings provided by Société Générale (SG). The objective was to modernize the invoice management system, streamline data collection and processing, and better track the financial evolution of service usage.

#### **Key Achievements and Responsibilities:**

- Initiated a project to optimize the operational costs of provided services, enabling significant savings and improved efficiency.
- Designed and developed a distributed ETL application in Python, dedicated to extracting and transforming diverse data into actionable financial indicators, thereby reducing operational costs.
- Developed APIs to expose backend data and functionalities, streamlining integration with other systems.
- Developed data-driven new features and enhancements for the web platform using React and TypeScript.
- Implemented and maintained CI/CD pipelines to ensure reliable delivery and deployment processes.

#### **Technologies Used:**

Python, Pandas, SQLAlchemy, PostgreSQL, Asyncio, Celery, RabbitMQ, FastAPI, Uvicorn, Nginx, Graphene (GraphQL), React, Typescript, Jenkins, Kubernetes, Docker, SonarQube, Vault, Power BI, ElasticSearch

#### **Delivery to Date:**

The developed tool collects raw data from various sources, transforms it to extract actionable financial information, and makes it available through PowerBI dashboards. The solution is currently in production.

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### **February 2020- September 2020: Python developer - Société Générale**

**Context:** Development and implementation of an intelligent chatbot designed to assist developers by answering their technical questions, leveraging a centralized knowledge base.

#### **Key Achievements and Responsibilities:**

- Designed and developed REST APIs using Python and Flask to expose chatbot functionalities and facilitate integration with other systems.
- Built an intelligent chatbot leveraging AI tools, developed with Rasa.
- Implemented and integrated automation solutions for deployment and continuous integration.

**Technologies Used:**

Python, Flask, Connexion, Rasa, GitHub, Jenkins Pipeline, Docker, Kubernetes

**Delivery to Date:**

The developed chatbot can provide clear and precise answers to user questions by utilizing a knowledge base hosted on GitHub.

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**June 2017- September 2017: Backend Developer Intern- EuraNova**

**Context:** Developed a tool for extracting and labeling company logos from video and image streams, storing them in a database in matrix format.

**Key Achievements and Responsibilities:**

- Developed a web application for labeling videos and images.
- Managed all Agile aspects.

**Technologies Used:**

Python, OpenCV, Flask, Html/CSS, JavaScript, jQuery, twig, MySQL, SQL Alchemy.

**Delivery to Date:** The delivered tool enables the extraction of logos from videos and images and stores them in a MySQL database.

**4. LANGUAGES**

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English : Fluent

Français : Fluent