Antoine Fusilier

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A driven Software, Data, Machine Learning Engineer with strong expertise in structured data pipelines, SQL/PLpgSQL development, and AI integration. I specialize in building scalable backend systems and contributing to NLP-based solutions, including, MCP servers, Embedding, RAGs, feature stores, model registries, vector stores, and chatbots. Currently focused on AI modelization engineering and developing ApollonAI — a framework to optimize model design and deployment (90 days > 5). I thrive in cross-functional teams and enjoy turning complex needs into clean, production-ready solutions.

*I take a **hands-on approach to project management** from brainstorming to production, yet am able to delegate with clarity and decisiveness. By motivating teams through individual guidance, encouragement, open dialogue and constructive criticism, I aim to **instill a culture in which team members take genuine pride in their work** and continually raise the bar of creativity for the company.*

Data Engineer — SG — 2023 - 2025
BANKING — *- formely SOCIÉTÉ GÉNÉRALE-*

Société Générale is the 2nd largest bank in France servicing 30M clients, ranking #6 in Europe and in the top 20 banks worldwide for total assets.
***I spearheaded the development of an internal application that transformed the management and distribution of AI model** features across the organization.*

- Led the development of an internal feature management platform used across AI teams, enabling structured reuse, documentation, and traceability of ML features.
- Designed and optimized structured data pipelines to support predictive models at scale, as part of the **DSR Feature Lake** and **Model and Vector Store** initiative.
- Contributed to the architecture and implementation of **Sobot** (AI chatbot) integrating NLP models and orchestration logic for smart automation.
- Participated in the preparation and design phase of the **Snowflake migration**, aligning data structures and legacy pipelines with the target cloud data warehouse.
- Built a Spring Boot + React application for real-time HDFS data extraction, connecting backend metadata to a user-friendly frontend interface.
- Developed multi-threaded **PLpgSQL scripts** and optimized SQL queries (joins, CTEs, aggregations) for data validation and ingestion workflows.
- Modeled relational data (MCD/MLD/MPD) with normalization (up to 3NF), ensuring data integrity and consistency across domains.
- Supported Scala-based standardization of legacy Talend pipelines and contributed to an internal Big Data framework focused on scalability and code quality.
- Collaborated with data scientists, DevOps, and product teams to align pipelines, APIs, and orchestration logic with functional goals.

Software Engineer — Magasin Leblanc — 2022 - 2023
HARDWARE RETAILER — BRAY -SUR-SEINE

*Although a portion of the business is dedicated in B2C, the core of its activity is **B2B**,stories, laboratories, co-operative farms, construction sites as well as municipalities with a **whopping catalogue of 90k+72k references** splitted in two suppliers, while stocking on site 12-30k SKUs.*

- Designed and maintained a **NodeJS + Angular dashboard** to synchronize data between local servers, cloud storage, and filesystems.
- Reorganized product databases, helping consolidate **supplier catalogs** into a single structure with improved data consistency.
- Wrote **SQL scripts** for data import/export, batch updates, and sync operations across systems.
- Assisted with **PrestaShop installation**, email server migration, and **Google Workspace administration**.
- Conducted data quality audits and supported the **planning of e-commerce architecture**.

CEO — Aideco — 2020 - 2021
FACILITIES SERVICES — NANTERRE

*Founded & managed a SME with a team of 11 employees, offering a range of innovative personal aide and decoration services including home cleaning, gardening, pet care and child support/coaching, as well as outdoor construction (e.g.: terrace building). I recruited mostly people in the 40 to 60 years old range, solving 2 problems at once: they had difficulty finding work, while **I could provide quality and experience to the clients**.*

- **Oversaw both office management and on-site operations**, personally leading green space projects to ensure high standards of service delivery.
- Directed human resources, accounting, and business development, while also actively supervising field work, ensuring efficient coordination between the administrative and operational sides of the business.

Skills

I.T.
- **AI, Machine Learning & Data Science:** TensorFlow, Keras, PyTorch,Scikit-learn,SpaCy,NLTK, OCR, OpenCV, CNNs, RNNs, GANs
- **Networking:** TCP/IP, HTTP/HTTPS, DNS, DHCP, Firewalls, VPNs, IDS/IPS, SSL/TLS, AES, RSA, OAuth, Dex
- **Frontend:** Angular,React, VueJS • **Backend:** Spring Boot, RestJS, Python, PHP, Rust, C++
- **Big Data:** Parquet,HDFS, Hadoop, Iceberg, Elastic Search, PostgresQL, MongoDB, MariaDB, MySQL, SQL Server, Redis, Minio
- **Cloud Computing:** KVM, Kubernetes, Ansible, Terraform, Dex, Spark, Kafka, AirFlow

MANAGEMENT
- **Agile:** Scrum/Kanban, Jira, Confluence, backlog
- **ERP:** Divalto, Odoo • **GRC:** RSA Archer
- **Business Intelligence:** Power BI, Google Sheets, Python

OTHER SKILLS: **Software Technologies:** Next.js - Flutter - React Native - Ionic - Electron - Tailwind - Sass - jQuery - Web Components - Three.js - Actix Web - Diesel **Data Management:** PostgreSQL - MySQL - MariaDB - SQL Server - MongoDB - Cassandra - Firebase - Redis HDFS - Apache Hive - S3 - GCP Storage - Snowflake - Elasticsearch - Memcached **ML & AI Technologies:** TensorFlow - PyTorch - Keras - Scikit-learn - Apache Mahout - MXNet - Caffe NLTK - SpaCy - Hugging Face Transformers OpenCV Pandas - NumPy - Dask MATLAB - RapidMiner - Weka **Big Data Technologies:** Hadoop - Spark Kafka Hive Beam **Devops & Cloud Technologies:** KVM - Docker - Kubernetes - Terraform - Ansible - Prometheus - AWS - GCP Jenkins - GitHub Actions - GitLab CI/CD **Programming Languages:** Python - JS - TS - Java - C++ - Go - Rust - PHP - Scala **Data Visualization Tools:** Power BI - D3.js - Kibana - Matplotlib - Seaborn **Testing & Quality Assurance:** Jest - PyTest - SonarQube

Studies

AI ENGINEER MASTER'S DEGREE
Education: development and deployment of AI solutions, data collection and analysis, creation of predictive models, classification via Deep Learning, data science project management, communication of results through visualizations.
- **Technologies:** Python, TensorFlow, Advanced SQL, NodeJS, Symfony, NLP, Deep Learning, Cloud (AWS, Azure), Git, GitHub.
- **Project Management:** Scoping of an artificial intelligence project.

BACHELOR OF SOFTWARE ENGINEERING
Education: Strengthen your back-end skills (Symfony or Node.JS) to design an application from the specifications to production (development, security, databases, project management...).
- **Technologies:** TensorFlow, UML, Merise, Advanced SQL, Advanced NodeJS, Angular, React, Cyber-security
- **Project Management:** AGILE (Scrum) methodology with Jira