Baptiste Pugnaire

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Results-driven **AI Engineer & Consultant** with a strong foundation in both **theoretical and applied ML**. Experienced in **designing, building and deploying scalable AI solutions** for enterprise use cases. I excel at tackling complex problems and connecting with stakeholders to ensure the solutions we build create value. I have a track record of **collaborating with cross-functional teams** (data scientists, engineers, and C-level stakeholders) to deliver **high-impact projects both as an individual collaborator and in customer-facing scenarios**.

Technologies and Expertise

Core Engineering & Languages: Python (Expert), SQL, JavaScript, C++.

Software Engineering (SE): Experience writing clean, well-structured code for production systems (experienced with Git, CI/CD tools, pre-commits, linting, and type checking).

Applied ML & Deep Learning:

- **Generative AI / NLP: HF Transformers**, **LangChain**, **LangGraph**, smolagents, vector DBs (**pgvector**, Pinecone, FAISS).
- **Frameworks: PyTorch** (Experienced), TensorFlow/Keras, NLTK.
- **Techniques:** RNNs, RLHF (Reinforcement Learning from Human Feedback), Tabular ML (gradient boosting methods, ensemble models, time series forecasting), interpretability.

MLOps & Cloud Infrastructure:

- **Cloud Platforms: GCP (Professional Data Engineer Certified)**, AWS (experienced).
- **Deployment Tools: Docker**, **Airflow**, **Databricks**, FastAPI, MLflow.
- **Data Processing:** PySpark, pandas, polars, duckDB.
- **Visualization/Front-end:** streamlit, gradio, Tableau.

Work Experience

Senior Data Scientist	Decathlon	Sep 2024–Present
Supply Chain	Paris, France	

- Developed, benchmarked, and designed a product assortment recommender system for eCommerce warehouses.
- Achieved a **10-percentage point increase** in full order coverage over the baseline solution in the first iteration and **15-percentage point decrease** in unsold articles.
- Deployed the ML solution into production for European warehouses, utilizing **PySpark**, **Databricks**, **MLflow** and **Airflow** for robust weekly MLOps operation.

Senior Strategy Consultant - AI/ML	WEnvision	2023–2024
GenAI/ML	Paris, France	

- **Delivered customer-facing technical guidance** and **led commercial discussions**, helping them define a Data Science and Generative AI approach to solve complex business issues (clients include L'Oréal, Safran, L'Occitane, Auchan).
- Engineered and evaluated a **RAG pipeline for an IT support chatbot deployed on GCP,** achieving 96% retrieval accuracy on a customer-defined Q&A benchmark.

- Conducted **sentiment analysis on LLM assistant chat logs** to extract actionable insights and identify common usage patterns.
- Built a **comprehensive benchmark of AI coding assistants** for deployment in secure, air-gapped environments, focusing on performance and security.
- **Delivered technical training sessions on Generative AI**, covering integration into products, and business impact. **Organized hackathons** focused on rapid prototyping of GenAI PoCs

Data Science Consultant   Wavestone   2020–2023
Data Science/ML   Paris, France

- Led a team of 4 to extract and structure data from over **20,000 complex PDF documents** using NLP techniques ([Archipel Project](#)).
- Led the technical project stream to refactor the C++ codebase and **improve the forecasting models** for a leading energy provider.
- Developed and implemented a **CNN model using PyTorch and OpenCV** for an autonomous driving prototype.

Data Science   Amadeus   2020
Revenue Management   Nice, France

- Developed and evaluated a PoC using **GRU RNNs and boosting algorithms**, demonstrating a potential **40% reduction in forecasting MSE**.
- Utilized model interpretability techniques (SHAP) to identify key seasonal drivers previously uncaptured by the baseline model.

Research Experience

Research Assistant Intern   Universitat Pompeu Fabra   2018
Music Technology Group   Barcelona, Spain

- Contributed to the development of an automatic system to evaluate musical rhythmic performances at the entrance exam of the conservatory.

Research Apprentice   Laboratoire d'Informatique et des Systèmes   2016-2018
QARMA team   Marseille, France

- Developed a Proof-of-Concept for audio declipping (reconstruction) leveraging **neural networks (Keras)**.
- Received training and applied Machine Learning techniques to audio processing tasks.

Education

- **M.Sc. Engineering,** École Centrale Méditerranée (3.94 GPA), France.   **2016–2020**
- **M.Sc. Artificial Intelligence & Machine Learning** (double degree)**,** Aix-Marseille Université, France   **2020**

Projects & Interests

- [**PokeRL**](#) **&** [**PokebattleRL**](#)**:** Explored state-of-the-art **Deep Reinforcement Learning algorithms** (especially [Dreamerv3](#)) and multi-modal AI concepts through collaborative personal projects.
- **Interests:** Competitive Handball player (discipline, teamwork), passionate about cinema and literature.