

Benny LAY

Data Scientist / AI Engineer

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EXPERIENCE

Aubay

AI R&D Intern

Feb. 2026 – Present

Boulogne-Billancourt, France

- **Automated coral bleaching detection** using Deep Learning and Computer Vision, leveraging **SAM** and **DINOv2** for segmentation and visual representation
- Engineered a custom annotated dataset and developed bleaching quantification via **colorimetric similarity (RGB Euclidean distance)** and regression modeling

Ulster University

Data Analyst Intern

Jul. 2024 – Nov. 2024

Londonderry, United Kingdom

- Analyzed datasets to support academic research focused on **improving student performance metrics**
- Developed a UI to streamline access to environmental datasets for the **LUNZ Hub** (Land Use for Net Zero) national project
- Designed and **automated a student project allocation system**, reducing manual administrative workload

PROJECTS

Age Prediction Deep Learning App | *PyTorch, FastAPI, React, Docker, Optuna*

- Trained a **ConvNeXt-Tiny** regression model on UTKFace dataset achieving **MAE of 4.49 years**; optimized hyperparameters with **Optuna** and containerized with **Docker** GPU support
- Developed a **FastAPI** backend with OpenCV face detection and **React** frontend
- Code reliability ensured by 17 **pytest** cases and automated **CI/CD** pipeline via GitHub Actions

SotaRAG — RAG Research Assistant | *Ollama, Qdrant, FastAPI, Redis, Streamlit*

- Built an end-to-end **RAG** system to query ArXiv papers in natural language using **Qdrant** for semantic search and **Ollama** for local LLM inference
- Architected an async ingestion pipeline (**TaskIQ + Redis**) for non-blocking PDF processing and orchestrated microservices with **Docker Compose**

Chess Analytics Dashboard | *Python, Streamlit, SQLite, Docker, GitHub Actions*

- Built a chess game analytics web app with an **ETL pipeline** integrating the Chess.com API with incremental ingestion and deduplication to **SQLite**
- Interactive **Streamlit** dashboard (rating evolution, opening analysis, win rates by game mode); containerized with **Docker Compose** and CI/CD via GitHub Actions

EDUCATION

ESEO

Master of Engineering in Computer Science & AI

2021 – 2026

Angers, France

- **Specialization:** Data Science and Artificial Intelligence

SKILLS

Programming: Python, SQL

AI & Machine Learning: PyTorch, TensorFlow, Scikit-Learn, Pandas

Backend & DevOps: FastAPI, Docker, Git, GitHub Actions (CI/CD)

Data Visualization: Power BI, Streamlit

Languages: French (Native), English (B2)