

BAPTISTE DUBILLAUD

Freelance Tech-Lead & AI Software Engineer

📍 Pau, France 🌐 dubillaudb.fr in [baptiste-dubillaud](https://baptiste-dubillaud.com)

Software engineer with six years of experience across energy, aerospace and the public sector, now working as a **Freelance Tech-Lead & AI Software Engineer**. Since 2023 I have designed and shipped **generative-AI** products (AI assistants, knowledge-extraction platforms, shared LLM APIs) from architecture to production, leading the teams that build them. Available for new **engagements** in Pau, Bordeaux, Paris or remotely.

Experience

Freelance Tech-Lead & AI Software Engineer

April 2026 – Present

Pau/Bordeaux/Paris, France

As a Freelance Tech-Lead & AI Software Engineer, I work with clients to design and build AI-based software solutions, with a focus on code quality, best practices and client satisfaction.

I handle every aspect of software development, from gathering requirements to final delivery, by way of architecture design, development, testing and deployment. I work closely with clients to understand their needs and deliver solutions that fit their business goals.

DTNum – DGFIP

April 2026 – Present

Tech Lead – GenAI Project

- **Digital Transformation Directorate (DTNum)** of the **DGFIP** – the French Public Tax Administration.
- Design and development of an **API** exposing locally-hosted models (**LLM**, **VLM**, rerank, embedding...) to the DGFIP's applications:
 - Raw access to the models.
 - Turnkey **Chat** and **RAG** solutions, plus various applications.
- Development of the authentication, authorization and usage management (token consumption) system.
- Python (FastAPI, OpenAI SDK, LangChain, LiteLLM, SQLAlchemy, Alembic), PostgreSQL, Qdrant, Redis, MinIO/S3, Docker, Kubernetes.

ThinkDeep AI, Senior GEN AI software engineer

April 2025 – April 2026

Bordeaux/Paris, France

- Currently working as a Senior GEN AI Software Engineer at ThinkDeep AI, a startup specialized in developing AI-powered software solutions.
- **DeepBrain** : platform extracting the knowledge from documents & data. Designed and implemented a group feature, integrated with Azure Entra ID, enabling secure knowledge and assistants sharing. Improved the user experience with new UI components and better performance.
- **AI Assistant**: working for DGFIP (French tax administration) to build an AI platform for public agents. Development of administration features (users, prompts, alerts) and improved overall project code quality by refactoring and formalization of practices.
- Exhibitor at **NVIDIA GTC Europe** in Paris.

TotalEnergies, Tech Lead & Software Engineer

March 2023 – March 2025

Esbjerg, Denmark

- Create, refine and maintain Proof of Concepts for the affiliate's Digital Laboratory.
- Structure the development environment to support growth by managing different Github repositories, Azure Landing Zone, Windows servers, and implementing SSL and SSO...
- Develop applications utilizing Generative AI, complex user interactions (chat, animations...), large data fetching and processing, SAP data integration, health and usage monitoring, architecture, and Azure.

- Achieved Top 10 finalist status twice in TotalEnergies' *E&P Best Innovators* awards.
- React (Next.js, Axios, Framer-Motion, MSAL), Python (FastAPI, Pandas, Numpy, Dash), Powershell, PostgreSQL, Azure (AD, Entra ID, Vector Database, Azure functions).

Airbus Defense & Space, Software Engineer

October 2021 – February 2023

Toulouse, France

- On behalf of **Viveris**, served as a member of an Airbus team developing a software for managing ground/satellite communications (encryption, decryption, routing), correcting anomalies, and implementing new features.
- Developed a simulator for the control center and satellite to support integration and performance tests of the application.
- Created a monitoring application to centralize logs and track the status of all different instances of the software deployed on multiple servers (both active and redundant instances).
- Java (Netty, Swing), C++ (Qt), Python (Squish), Redmine, Squash, Jenkins, Gitlab, Sonarqube.

TotalEnergies, Software Engineer

September 2020 – September 2021

Pau, France

- Member of the AVO geophysicists and geoscientists team, working on a new set of computation and visualization tools for the SISMAGE-CIG, the geophysics software of TotalEnergies.
Java (Swing, AWT), C, C++, Fortran, Git, Gerrit, Sonar, Jira, Jenkins.
- Project manager for the development of a web application of geophysics tools. Managed 3 interns.
Angular, ExpressJS, NodeJS, BitBucket.

TotalEnergies, Software Developer Intern

May 2021 – August 2021

Pau, France

- Design and development of a well water injection simulation software.
- Java (Java FX, Control FX), Bash, Python, Fortran, BitBucket.

TotalEnergies, Software Developer Intern

May 2020 – Aug. 2020

Pau, France

- Development of visualization tools from scratch on SISMAGE-CIG, the geophysics platform of TotalEnergies on behalf of the geophysicists/geoscientists AVO team.
- Java (Swing), Git, Gerrit.

Conforama, Salesman, student job

June 2018 – August 2019

Lescar, France

- Seller of household appliances (TV, computers, washing machine...). 15 hours a week.

Education

MS CY-Tech (EISTI), Computer Science

2016 – 2021

- **Coursework:** Software Architecture, Algorithms, Machine Learning, Databases, Web development...
- Specialization in Big Data frameworks through Big Data Analytics classes.
- Spark, Pandas, Seaborn, D3.js.

- University of La Coruña, HPC Course

2020 – 2021

- **Coursework:** HPC Architecture, GPU and CPU architecture, Compilers, Multi-threading algorithms, Image processing.
- One year course in High Performance Computing (HPC).
- Final project: Development and optimization of an algorithm to filter data cubes from seismic imaging (Pangea II HPC at TotalEnergies).
- Multi-threading (OpenMP, MPI, Cuda, OpenCL), Image processing (OpenCV), Fortran, C, C++.

Technologies

Generative AI:

OpenAI SDK, LangChain, LiteLLM, self-hosted models (LLM, VLM, embedding, rerank),
RAG, vector databases: Qdrant, Vespa

Software:

Python: FastAPI, SQLAlchemy, Alembic, Pandas, NumPy,
Java: AWT/SWING/JavaFX, Netty, Spark,
C: OpenMP, MPI,
C++: Qt, some basis in CUDA

Web:

Javascript: React (Next.js, Framer-Motion, MSAL), Vue.js, Angular, Node.js,
Visualization: Recharts, D3.js, Dash, Streamlit

Data: PostgreSQL, Qdrant, Vespa, Redis, MinIO/S3, SAP, PI-Vision

Deployment:

Docker, Kubernetes, Poetry,
Azure: Azure AD, Entra ID, Landing Zone management, Azure functions, Github actions,
Windows Server: IIS and windows servers apps

VCS & tools: Git, Github, Gitlab, Gerrit, Jenkins, Sonarqube, Jira, Redmine, VS Code, IntelliJ IDEA, DataGrip

References

References available **upon request**.