



Pierre BELIN

Senior Software Engineer – Backend, Architecture & Product

Software engineer with 10 years of experience, I design reliable backend products, from business needs to production. My experience includes legacy system modernization, scaling distributed applications, and designing domain-oriented products.

I combine architecture, DDD, automated testing and AI to accelerate delivery without compromising quality or maintainability.

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Fluent English / French

Experience

.NET Software Engineer Architect

Jun 2023 – Present

Skills:

- .NET 10
- ASP.NET Core
- Clean Architecture
- DDD
- Test First
- Automated Testing
- SQL Server
- Software Industrialization
- Always Encrypted
- AI-powered Code Generation with Claude Code

STid (France) · Industry

Project 1: Scaling an RFID authentication application with more than one million cards and supporting over 30,000 requests per minute.

The mission involved taking over and simplifying more than ten years of legacy code, improving performance and evolving the application toward a Clean Architecture based on the DDD paradigm.

Mission objectives:

- Take over and improve the existing functional code, although no tests existed for the legacy code.
- Create more than 5,000 tests to secure the migration and prevent regressions.
- Design more efficient architectures for certain functional components.
- Strengthen security with Keycloak, Vault, Row-Level Security and Always Encrypted.
- Collaborate with several teams: web, Android, iOS and marketing.

Project 2: Design, together with hardware experts, of a business-oriented DSL used to describe assistants and configuration workflows for RFID readers, and then generate the associated graphs and templates.

The project enables hardware teams to evolve product behavior without writing code, by decoupling configurable logic from the technical foundation.

Mission objectives:

- Formalize business requirements and create a language close to users' vocabulary.
- Develop the interpreter and generate graphs from DSL files.
- Create a VS Code extension with syntax validation, business rules and linting.
- Industrialize development with Claude Code within a two-developer team.
- Implement a systematic testing strategy to deliver daily without regressions.

Trainer Technical Instructor

2019 – Present

Skills:

- Mentoring
- Knowledge Sharing
- Automated Testing
- Claude Code

Higher Education Institutions & Companies – .NET, Quality & AI Training

Interventions with higher-education students and development teams on .NET, software testability and LLM-based development automation.

The training combines theory, hands-on work on real code and support for teams using Claude Code and Codex.

Mission objectives:

- Train students from the first to the third year of higher education and professional developers in the .NET ecosystem.
- Teach the principles of testability, automated testing, TDD and software quality practices.
- Support the integration of Claude Code and Codex into development workflows, from specification to code and test generation.
- Adapt training content to the concrete challenges of schools and development teams.

.NET Software Engineer Architect

Jul 2024 - Sep 2024

Skills:

- .NET 8
- ASP.NET Core
- REST API
- Clean Architecture
- Generative AI
- Automated Testing

Python Developer AI Integration Engineer

Dec 2023

Skills:

- Python
- LangChain
- ChatGPT
- Docker
- Automated Testing

.NET Software Engineer DevOps

Jun 2022 - Nov 2023

Skills:

- .NET 8
- ASP.NET Core
- RabbitMQ
- Redis
- Docker / Kubernetes
- Automated Testing
- SQL Server
- Software Industrialization

.NET Software Engineer

Mar 2020 - May 2022

Skills:

- .NET 5
- ASP.NET Core
- REST API
- SQL Server
- Sigfox
- RabbitMQ
- Grafana/Loki
- GraphQL
- Docker
- AKS/Kubernetes
- Automated Testing

Exon (France) · Accounting / Fintech

Creation, in three months, of a SaaS MVP designed to simplify interactions between accountants and their clients when resolving accounting anomalies. The project integrated generative AI to produce the questions required to analyze anomalies.

Mission objectives:

- Develop the API and set up the server and CI/CD pipeline.
- Translate business requirements into concrete features.
- Integrate generative AI into the anomaly resolution process.
- Structure the application using Clean Architecture andDDD.

DigitalKin (France) · IA / Data

Optimization of a LangChain application generating documents for the Research Tax Credit. Parallelizing ChatGPT calls reduced execution time from two hours to twenty minutes.

Mission objectives:

- Stabilize the document generation application.
- Parallelize ChatGPT calls to reduce processing time sixfold.
- Create a reproducible Docker environment.
- Add a testing strategy.

Symbotic (United States) · Robotics

Re-architecture of a robotic fleet management and control application, scaling from 400 to 8,000 robots managed in real time, with a response time below 50 ms. The mission was carried out in English, in daily collaboration with a US-based team in Boston.

Mission objectives:

- Remove the main legacy bottlenecks and migrate the application to the actor model with Akka.NET.
- Design an architecture adapted to distributed processing and real-time communication.
- Develop new features and support teams in making them easily testable without starting the entire infrastructure, using dependency injection and a clear separation of responsibilities.
- Implement unit and integration tests to secure future developments.
- Migrate the application to Kubernetes and create Helm scripts to improve deployment reliability.
- Ensure technical coordination and project management in English with the US teams.

Asalog (France) · Energy

Project 1: Development of the backend for an application used to remotely monitor CNG/NGV distribution stations, retrieve their Sigfox measurements and detect operational anomalies.

Mission objectives:

- Develop the backend within a team of four developers.
- Design monitoring and supply APIs.
- Retrieve Sigfox measurements and consolidate external data from FTP.
- Set up real-time dashboards and user management.

Project 2: Transformation of the alpha version into a production-ready solution, with a new application architecture and distributed infrastructure deployed on Azure Kubernetes Service.

Mission objectives:

- Define a microservices architecture and simplify communication between services.
- Set up a Kubernetes infrastructure on Azure AKS.
- Create a CI/CD pipeline covering three environments.
- Add RabbitMQ, Redis and GraphQL to improve communication and performance.
- Implement observability with Grafana and Loki.

Symfony Developer

Jan 2021 – Mar 2021

Skills:

- Symfony 5.2
- X.509 / PKCS7
- Docker
- OpenAPI 3 / Swagger
- Automated Testing

Stad Services (France) · Digital Services

Evolution of a management application connected to the ANTS API, while maintaining V1 compatibility and developing V2. The mission also involved encryption, image processing and administration features,

Mission objectives:

- Upgrade the integration to the ANTS API V2 while maintaining V1.
- Implement X.509 encryption and PKCS7 mechanisms.
- Develop Bitmap-to-JPG2000 image conversion.
- Create an administration interface and document the API.

PHP Developer Project Manager

Sep 2018 – Mar 2020

Skills:

- PHP/Symfony
- Project Management
- PrestaShop
- WordPress

ITIS Commerce (France) · E-commerce

Management of PrestaShop maintenance and development for several e-commerce solutions. The mission included coordinating freelancers and creating a synchronization module with the Sellsy CRM.

Mission objectives:

- Manage PrestaShop maintenance and development.
- Coordinate freelance developers and track client requests.
- Develop PHP modules and PrestaShop plugins.
- Design the synchronization between PrestaShop and Sellsy.

.NET Software Engineer

Sep 2015 – Aug 2018

Skills:

- .NET Framework
- WPF
- Monitoring

STMicroelectronics (France) · Semiconductors

Development of full-stack software dedicated to manufacturing process monitoring. The solutions were designed in direct collaboration with internal clients and industrial teams.

Mission objectives:

- Develop applications for monitoring manufacturing processes.
- Design monitoring interfaces and features.
- Gather requirements from internal clients.
- Evolve tools according to industrial constraints.

Education

IMT Alès (Mines)

2015 – 2018

Computer Science Engineering Degree

Work-study program at STMicroelectronics from 2015, as a .NET developer.

IUT2 Grenoble

2013 – 2015

University Diploma of Technology in Computer Science

Additional Activities

2026

Speaker – Snowcamp 2026

Technical conference

Talk: "Unnecessary complexity: when our best practices become traps."

2021 – Present

GoatReview – Co-founder

Creation of technical content about .NET, software architecture, code quality and AI.

Management of a Discord community of more than 150 .NET freelancers.

Development of a newsletter followed by more than 500 subscribers.

2024

Microsoft MVP C# .NET

2020 – 2021

Academic Program Coordinator – WebTech Institute

Educational support for a higher-education institution specializing in computer science, from the first year of higher education through Master's level.