

Loïc Bélec

Head of Data Platform | Principal Cloud & Data Architect

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PROFILE

Head of Data Platform and Cloud & Data Architect with 10+ years of experience in Formula 1 and high-performance engineering environments. Specialized in hybrid cloud, HPC and real-time telemetry systems at scale. Experienced in leading teams, managing €1.5M+ cloud spend, and aligning platform strategy with executive and engineering priorities.

KEY IMPACT

- Built hybrid cloud platform supporting Formula 1 engineering operations
- Contributed to **13 Formula 1 Grand Prix victories**
- Managed **€1.5M+ cloud budget** with strong FinOps discipline
- Designed real-time telemetry systems handling **20M samples/sec**
- Led and mentored a team of **6 engineers**
- Built AI-enabled knowledge access capabilities for executive and engineering teams

PROFESSIONAL EXPERIENCE

Alpine, Cloud & Data Architect – Technical Team Lead 01/2023 – present | Viry-Châtillon, France

- Led the architecture of a hybrid cloud platform (on-prem + Azure) supporting high-performance engineering workloads (SAP, 3DEXPERIENCE, telemetry systems)

- **Managed €1.5M+ cloud budget** and €480k+ services, driving FinOps optimization and cost-performance alignment
- Designed a low-latency hub-and-spoke network with ExpressRoute for critical data flows between track, factory and cloud
- Built an AI-powered knowledge graph (RAG + Synapse) enabling C-level and engineering teams to query complex data
- Acted as a strategic interface between engineering teams and executive leadership on data and cloud strategy
- Managed and mentored a team of **6 engineers** across cloud, data, and DevOps

Alpine F1 Team, High-Performance Data Architect 07/2018 – 12/2022 | Viry-Châtillon & Enstone

- Architected a high-frequency telemetry platform (peak: **20M samples/sec**)
- **Contributed to 13 Formula 1 Grand Prix** victories through reliable real-time data systems
- Deployed full Azure infrastructure via Terraform (IaC) across global environments
- Integrated Kafka across factories and trackside for real-time ingestion

Renault F1 Team, Data Engineer 02/2014 – 06/2018 | Viry-Châtillon, France

- Built data pipelines for CFD and engine simulations
- Developed MATLAB frameworks still used in race operations
- Integrated SAP and engineering systems for predictive maintenance

Industrial Department of Tongji University, Researcher – Master's Project 09/2012 – 12/2013 | Shanghai, China

- Conducted research on U-shaped assembly line balancing problems (U-ALBP).
- Reviewed, categorized, and implemented optimization algorithms in MATLAB, including ant colony optimization techniques.

EDUCATION

MSc Industrial and Mechanical Engineering, Tongji University 09/2012 – 12/2013 | Shanghai, China

Master's Degree in General Engineering, Arts & Métiers ParisTech 09/2010 – 12/2013 | Paris, France

SKILLS

Cloud & Infrastructure

Azure, GCP, Terraform, Hub-and-Spoke, ExpressRoute

HPC & Data

Kafka, kdb+, Azure NetApp Files, Synapse, HPC orchestration

Development & AI

Python, Rust, MATLAB

Governance

FinOps, DevSecOps, Purview, TOGAF, OpenMetadata

LANGUAGES

- French
- English
- Mandarin Chinese
- Spanish

AWARDS & ACHIEVEMENTS

Prix de la Photographie des Maisons du Voyage 2012, Le Monde 01/2013
Exhibition at Place Saint-Sulpice, Paris

CSC Scholarship, Chinese Scholarship Council 09/2012
Recipient of the Chinese Government Excellence Scholarship (CSC)

PROJECTS

Pitgun.io [🔗](#), Real-time telemetry & simulation platform (Rust, streaming, HPC) 10/2025

- Designed a deterministic data processing framework in Rust, validated through a live telemetry workload
- Architected an end-to-end platform from ingestion to simulation, inspired by Formula 1 engineering systems

INTERESTS

Powerlifting

560 kg total in the -93 kg category

Cycling

50 to 100 km per week

Photography [🔗](#)

Studio Bélec

PUBLICATIONS

Proceedings of the 21st International Conference on Industrial Engineering and Engineering Management 2014 [🔗](#) 06/01/2015