BREUNEVAL ROMAIN
Senior Data / ML Engineer, PhD

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📍 France

Senior Data Engineer with 8+ years of experience building large-scale time-series pipelines and ML platforms in industrial contexts. Strong focus on reproducibility, MLOps, and cost-efficient inference. Comfortable operating across data engineering and ML workflows.
LinkedIn : https://www.linkedin.com/in/romainbreuneval/
Github : https://github.com/rbreunev
HF : https://huggingface.co/rbreunev

💼 EXPERIENCES

Data/ML Engineer
Metroscope - Since November 2022

- AI diagnostics to optimize performance and reduce downtime
- Integrated ML components for self-service anomaly detection in production
- Built and operated GB-TB-scale time-series data pipelines
- Deployed hundreds of ML models with inference costs < €1k/month
- Developed industrial data-collection partnerships
- Building a shared data platform across all product modules

Senior Data Scientist
Bull (Atos) - November 2021 to November 2022

- Developed predictive maintenance solutions for high-performance computing (HPC) systems
- Delivered customer-facing POCs, from pain-point analysis to ML validation
- Mentored two junior data scientists on production-ready ML practices

Data Scientist / Engineer
Alstom - February 2018 to October 2021

- Industrialized a predictive maintenance solution from prototype to production
- Designed and deployed data pipelines and ML algorithms under operational constraints
- Led efforts on testing, CI, monitoring, and production feedback pipelines

Health Monitoring Engineer (PhD Student)
Safran Electronics & Defense - January 2015 to December 2017

- Conducted health monitoring research on electromechanical flight-control actuators
- Developed models combining signal processing, system modeling, and ML
- Results included international patents and peer-reviewed publications

🎓 EDUCATION

Mechanical Engineering - Mechatronics
UNIVERSITÉ DE TECHNOLOGIE DE COMPIÈGNE (UTC)
September 2010 to September 2014

PhD in Electrical & Electronics Eng.
UNIVERSITÉ LYON 1 CLAUDE BERNARD
January 2015 to January 2018

https://theses.hal.science/tel-03934553
http://www.ampere-lab.fr/spip.php?article992

📋 SKILLS

Data
- Python libs : Polars, Pandas, Skrub
- Others : PostgreSQL, Azure Data Explorer

Infra
Kubernetes, Docker, Azure, Github, Terraform

Orchestration
Airflow

ML tooling
scikit-learn, MLFlow, Seldon, DVC

Observability
Grafana, Prometheus

Languages
- Current : Python, SQL, Bash
- In the past : Matlab, R, some Go

Others
Mechatronics & Reliability

📨 INTERESTS

Literature
Sciences, SF, Fantastic, Economy, Philosophy