



PFE BOOK 2025

Industrial AI engineering : From real-time to intelligent self-improving systems

magnus-data.com

About MagnusData

We connect machines, understand their context (docs, history, live data), guide your teams in the moment, and continuously improve performance

- >> cutting downtime 30–50%,**
- >> reduce maintenance costs 18–25%,**
- >> reduce energy 11%.**

Software Projects

Magnus Mobile

Goal

Provide real-time monitoring accessibility on mobile devices

Tech Stack

React Native 0.72+ TypeScript Redux Toolkit AWS Cognito
AppSync API Gateway S3 AWS Lambda

Software Projects

OpenSearch Monitoring

Goal

Build an application that supports the management and monitoring of machine production databases (cleanup of unused tables for optimization, real-time data-storage supervision, easy access to raw data, etc.).

Tech Stack

OpenSearch / Elasticsearch, FastAPI, Python, ETL pipelines, Airflow, Kibana, Streamlit

Embedded-software Projects

MAGNUS Real-Time Connectivity

Goal

Develop a complete connectivity-management module between industrial data sources and the MAGNUS Cloud.

Tech Stack

Python, Modbus, MQTT, Edge computing (Raspberry Pi), Docker.

AI Projects

MAIA Agentic Reasoning

Goal

Deliver an agentic system MAIA in a version that is capable of contextual and industrial reasoning in its recommendations and analyses.

Tech Stack

LLMs, RAG, Python, LangChain LangGraph, AWS S3, FastAPI, AzureOpenAI
Prompt engineering

AI Projects

MAIA Agent Evaluation

Goal

Build evaluation, traceability, monitoring, and continuous-improvement pipelines. Define and track effectiveness metrics aligned with industrial needs and standard benchmarks. Automate systematic improvements with feedback loops. Enable investigation and backtracking of MAIA agent behavior.

Tech Stack

Ragas LangChain FastAPI ChromaDB LangServe Airflow MLflow



Send your portfolio

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