ABOUT FACTORY DB

Data and AI enabled Manufacturing

Our goal

We are currently seeking industry and research partners for open-source collaborations to realize AI-enabled smart manufacturing.

Key difference

We believe the current proprietary, vendor-locked landscape severely hinders innovation and productivity on the factory floor. DataForge aims to change this by building an open, modular, and intelligent data infrastructure.

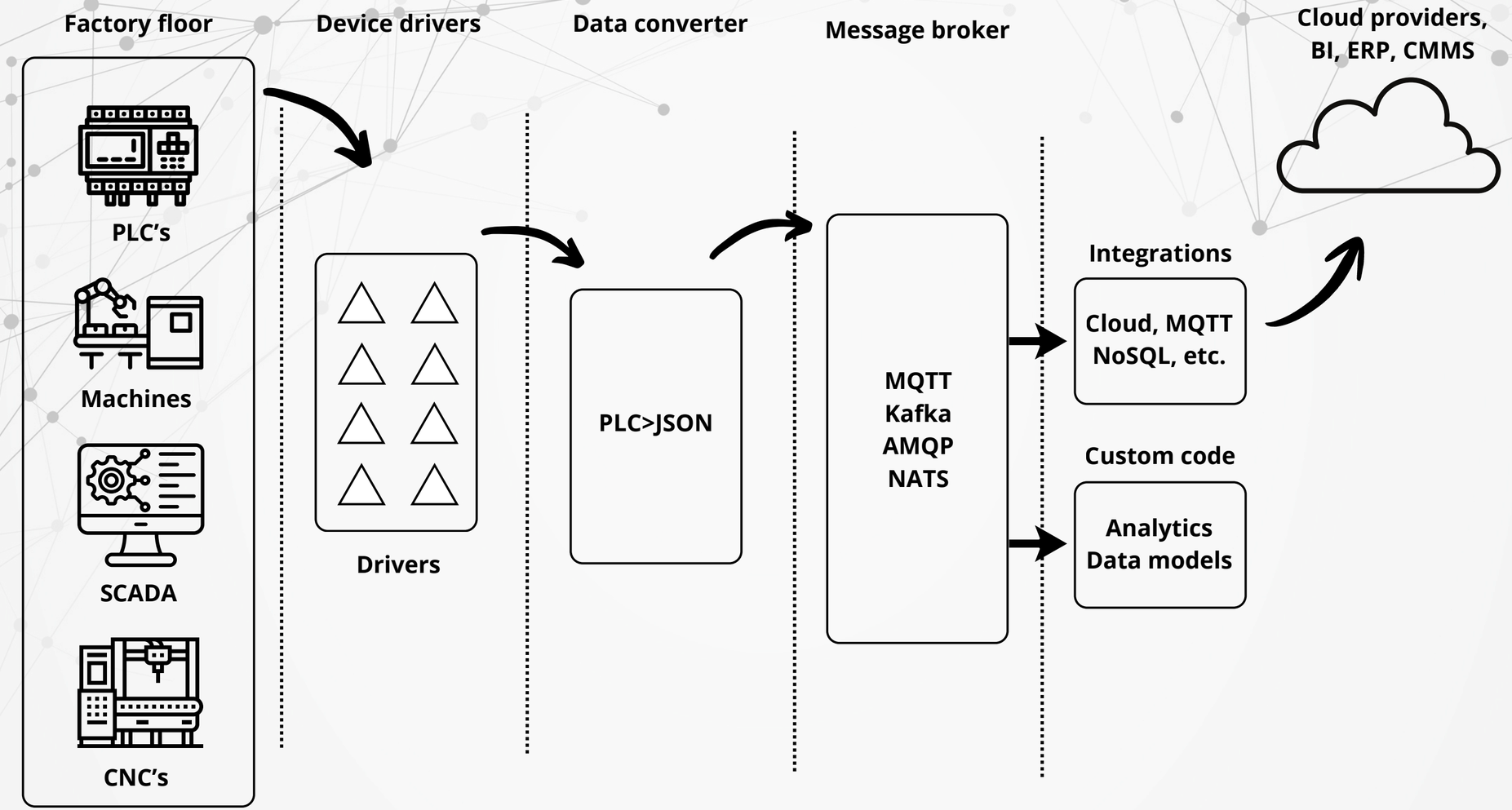
CORE INFRASTRUCTURE DEVELOPED:

01 Real-time data broker based on MQTT

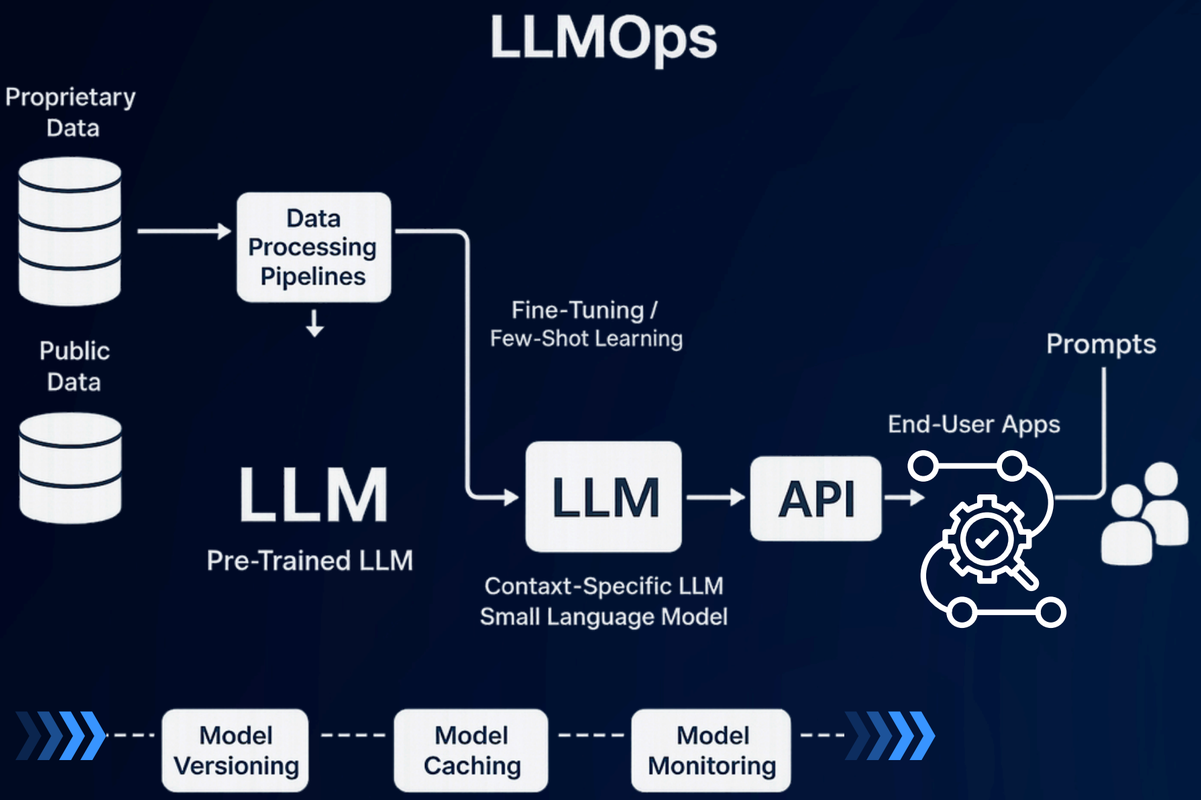
02 InfluxDB time-series database for historical data

03 Resilient cybersecurity architecture (hardware-based + VPN)

04 Dataiku ML Ops platform for analytics, machine learning and AI pipeline management


Factory floor
Device drivers
Data converter
Message broker
Cloud providers,
BI, ERP, CMMS
PLC's
Machines
SCADA
CNC's
Drivers
PLC>JSON
MQTT
Kafka
AMQP
NATS
Integrations
Cloud, MQTT
NoSQL, etc.
Custom code
Analytics
Data models

NEXT DEVELOPMENT GOALS



Knowledge Graphs

Build knowledge graph database based on plant documentation to add contextual understanding to live and historical data.

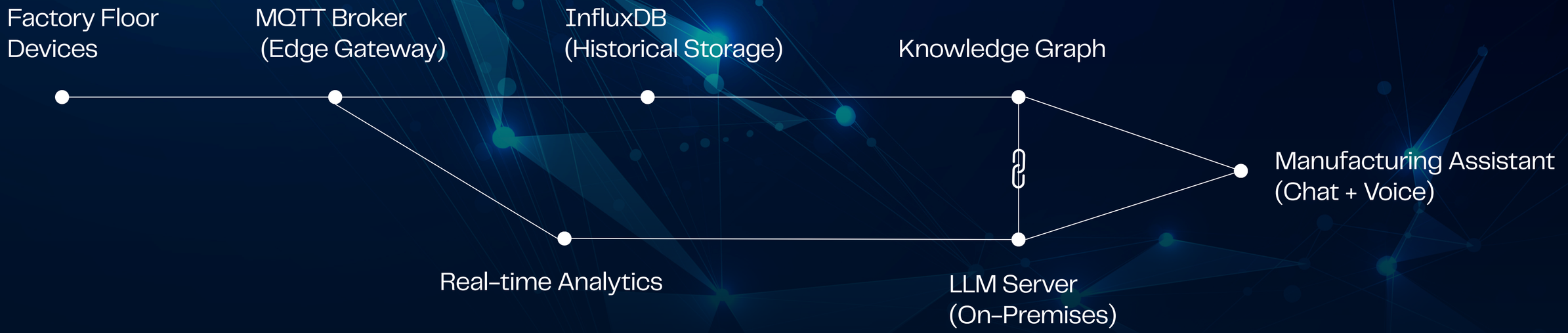
Manufacturing Assistant

Develop a chat + voice interface that combines real-time data, knowledge graphs and LLMs to support engineers and operators in daily decision making.

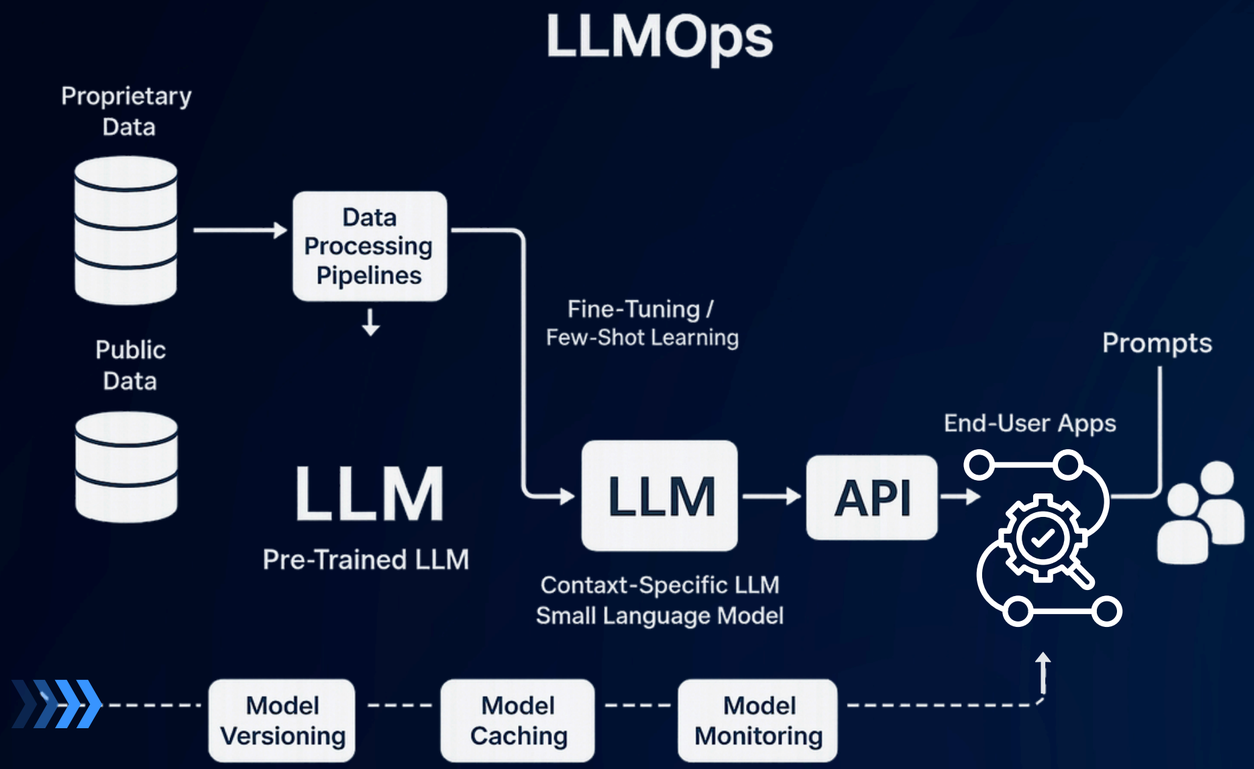
On-Prem LLM Server

Deploy a factory-floor-ready, on-premise large language model to keep all inference workloads local for security and latency.

SYSTEM ARCHITECTURE



NEXT DEVELOPMENT GOALS



Knowledge Graphs

Build knowledge graph database based on plant documentation to add contextual understanding to live and historical data.

Manufacturing Assistant

Develop a chat + voice interface that combines real-time data, knowledge graphs and LLMs to support engineers and operators in daily decision making.

On-Prem LLM Server

Deploy a factory-floor-ready, on-premise large language model to keep all inference workloads local for security and latency.