[1. Data Acquisition & Streaming]

OPC UA-based CtrlX data is published through Solace for real-time ETL integration.

[2. Data Processing & Storage Layer]

Hybrid ETL performs normalization and time-based aggregation, storing results in PostgreSQL and InfluxDB.

[3. Analytics & AI Layer]

Dagster orchestrates ML/DL workflows for model training, prediction, and visualization.