



# Enhanced Service Operations

The Story of Infor Augmented Intelligence in the Service Order Life Cycle Management

<https://community.developer.infor.com/categories/hackathon>

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*Honorary Mention Infor hackathon 2024*

# Who are we?



ESTABLISHED  
2003



PRIVATELY  
OWNED



5 OFFICES - HQ  
IN STOCKHOLM



85+  
CONSULTANTS

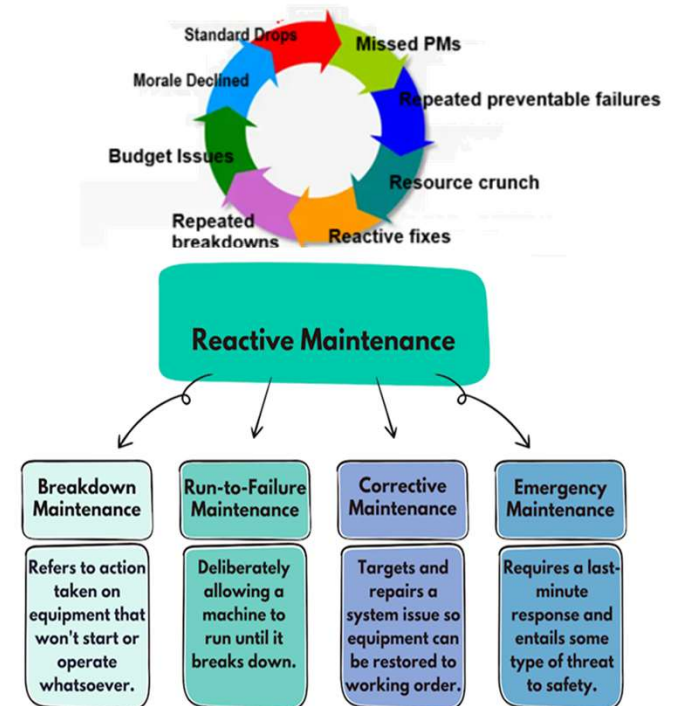


150+ MSEK  
REVENUE

# Agenda

- The challenges of reactive maintenance.
- How Augmented Intelligence enables proactive efficiency.
- Real-world applications and possibilities.
- Platform features

# The Challenge: Reactive Service Operations



# The Thought: How to come out of the reactive chaos?

- What if we could predict and prevent the issues before they happen?
- What if we could allocate resources more effectively?

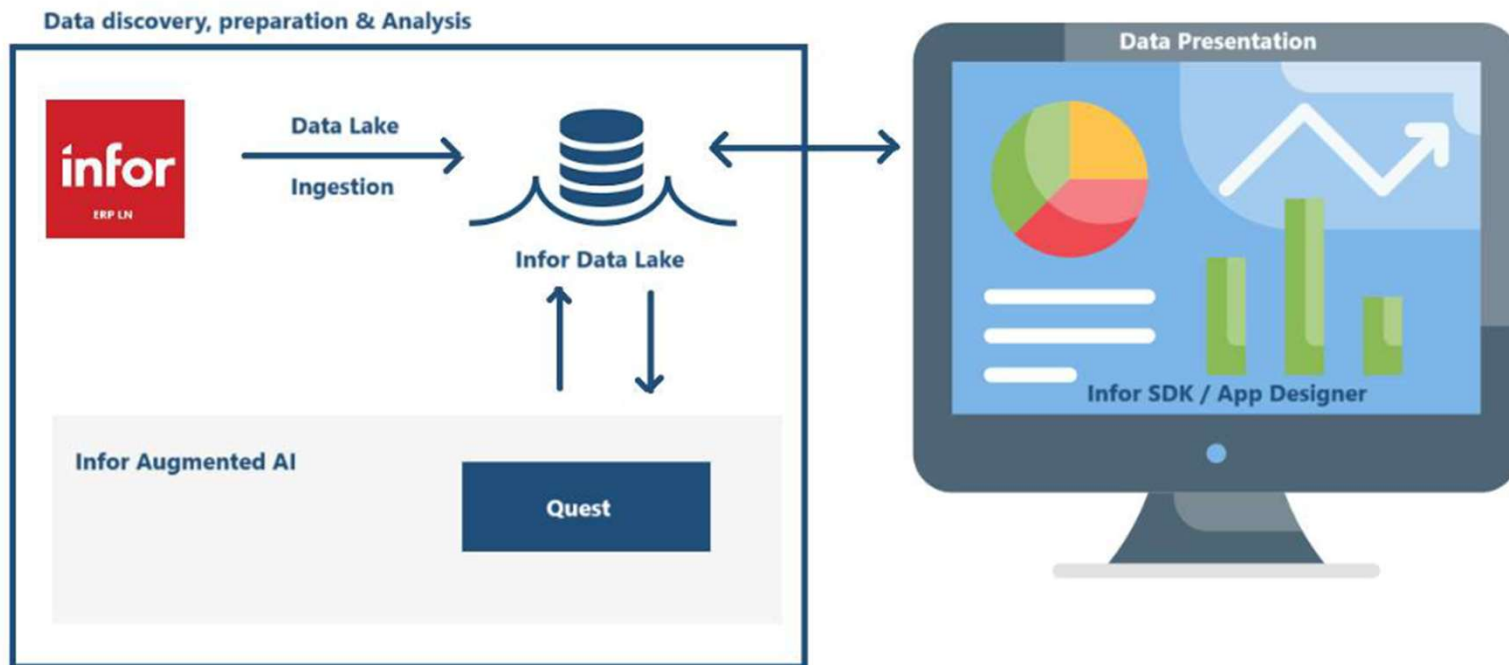


# Augmented Intelligence

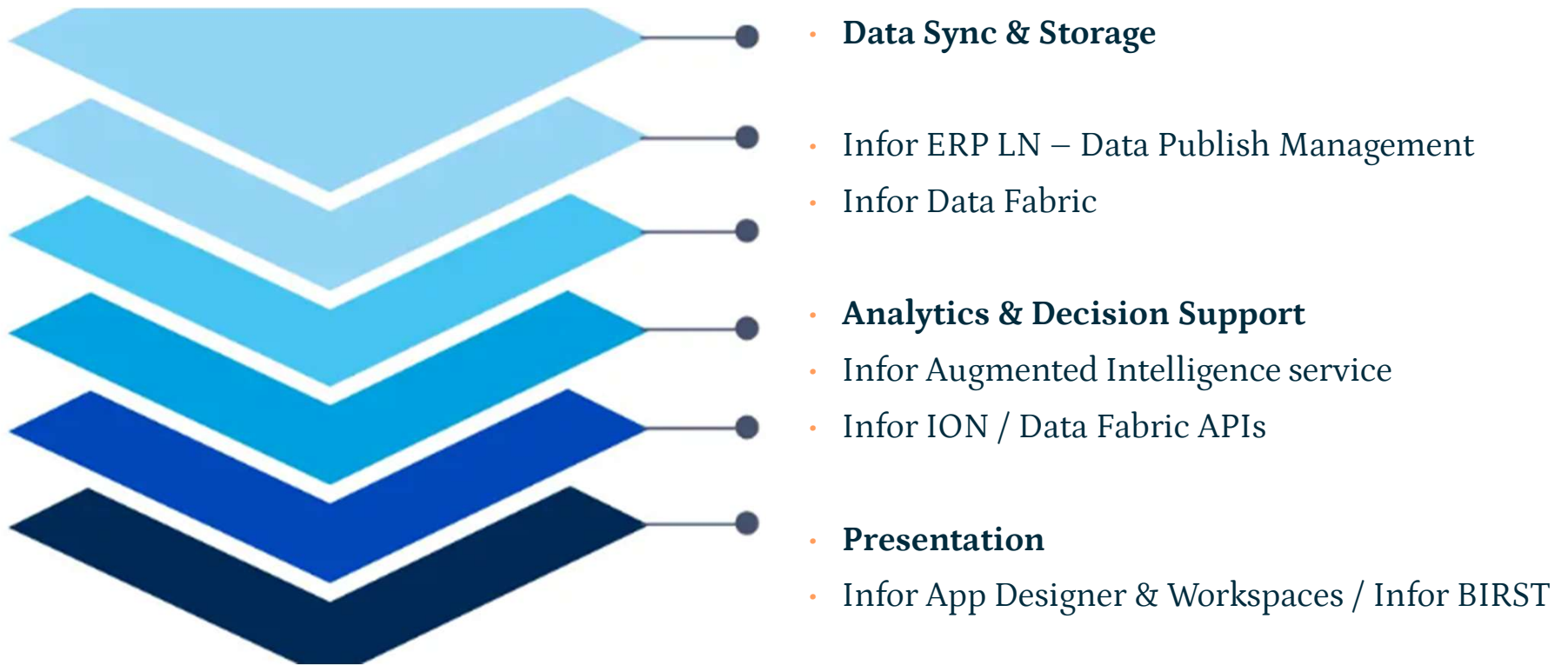
Turning the reactive chaos into proactive efficiency



# Solution Architecture



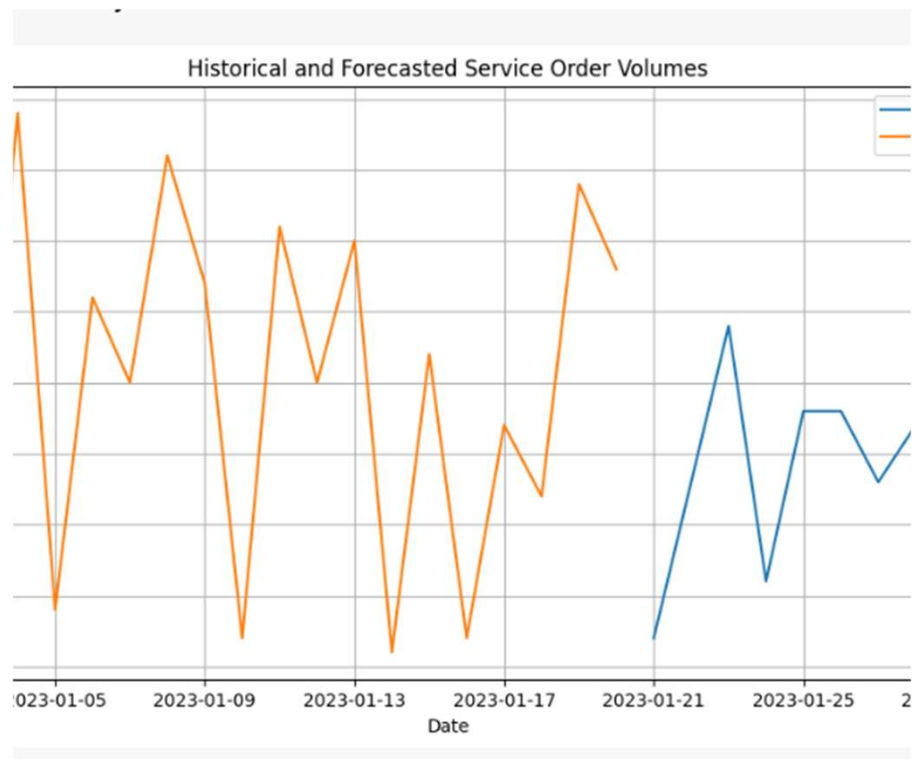
# Tech Stack





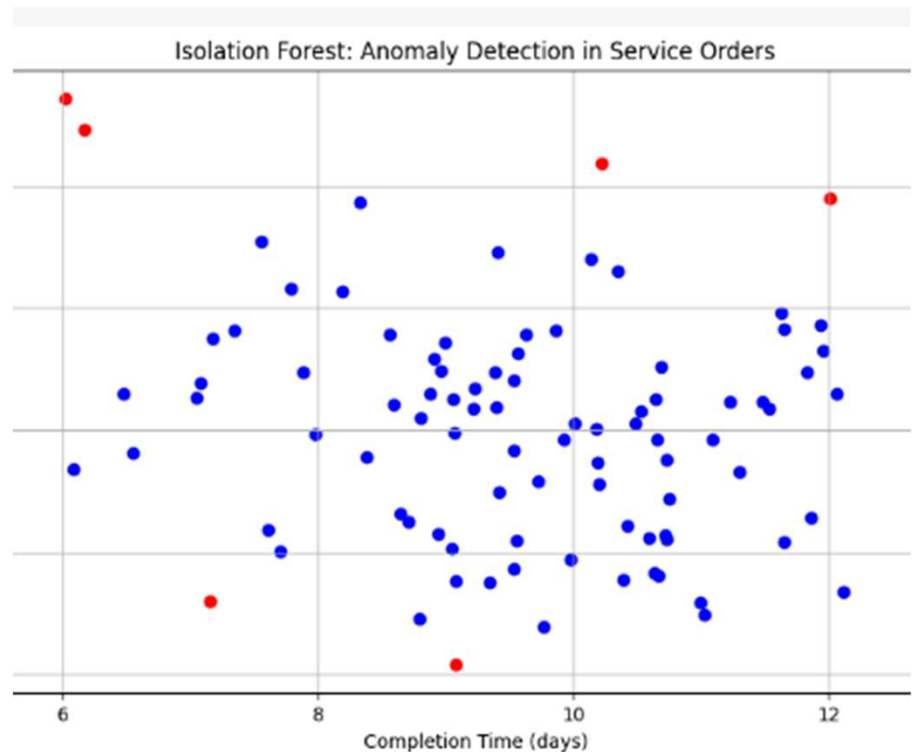
# Demand Forecasting

- **Predictive Analysis**
- **Goal** : Predict future service order volumes to optimize resource allocation.
- **Data source**: ERP LN Service Orders
- **Model used**: DeepAR

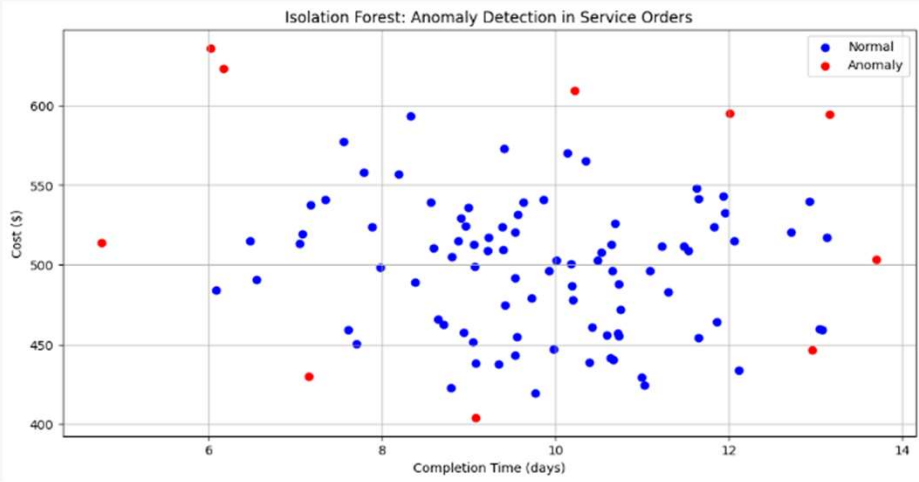
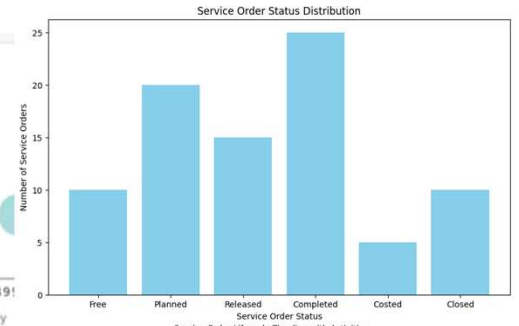
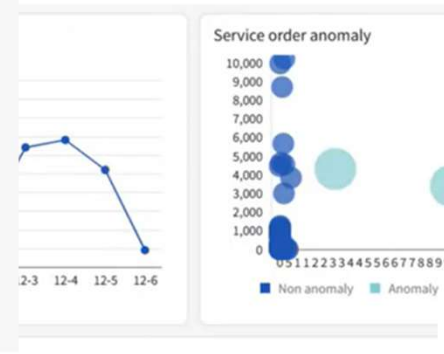
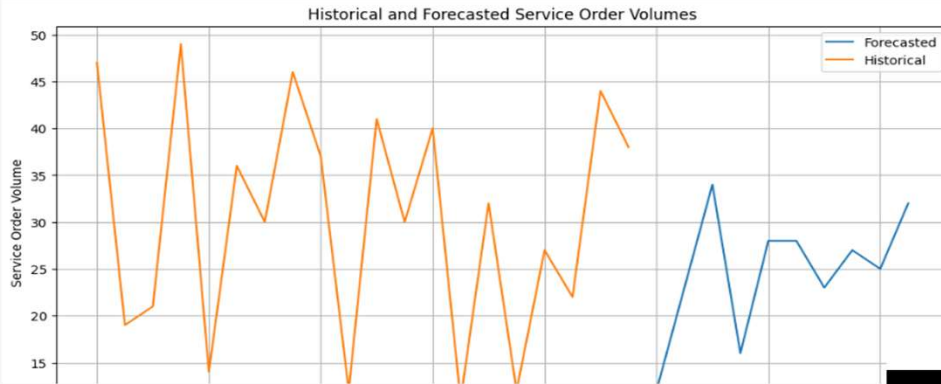


# Anomaly Detection

- **Goal:** Identify unusual patterns in service orders that may indicate issues like delays or cost overruns.
- **Data source:** ERP LN Service Orders & costs
- **Model used:** IsolationForest

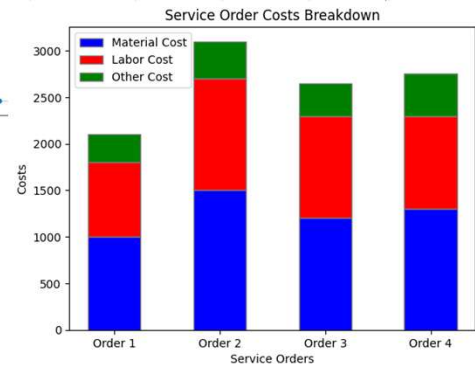
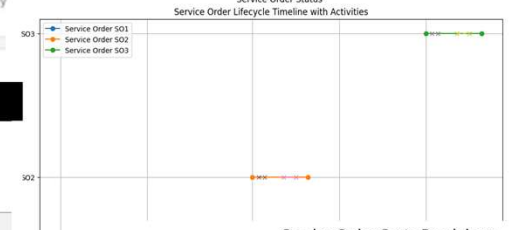


# Visualizations

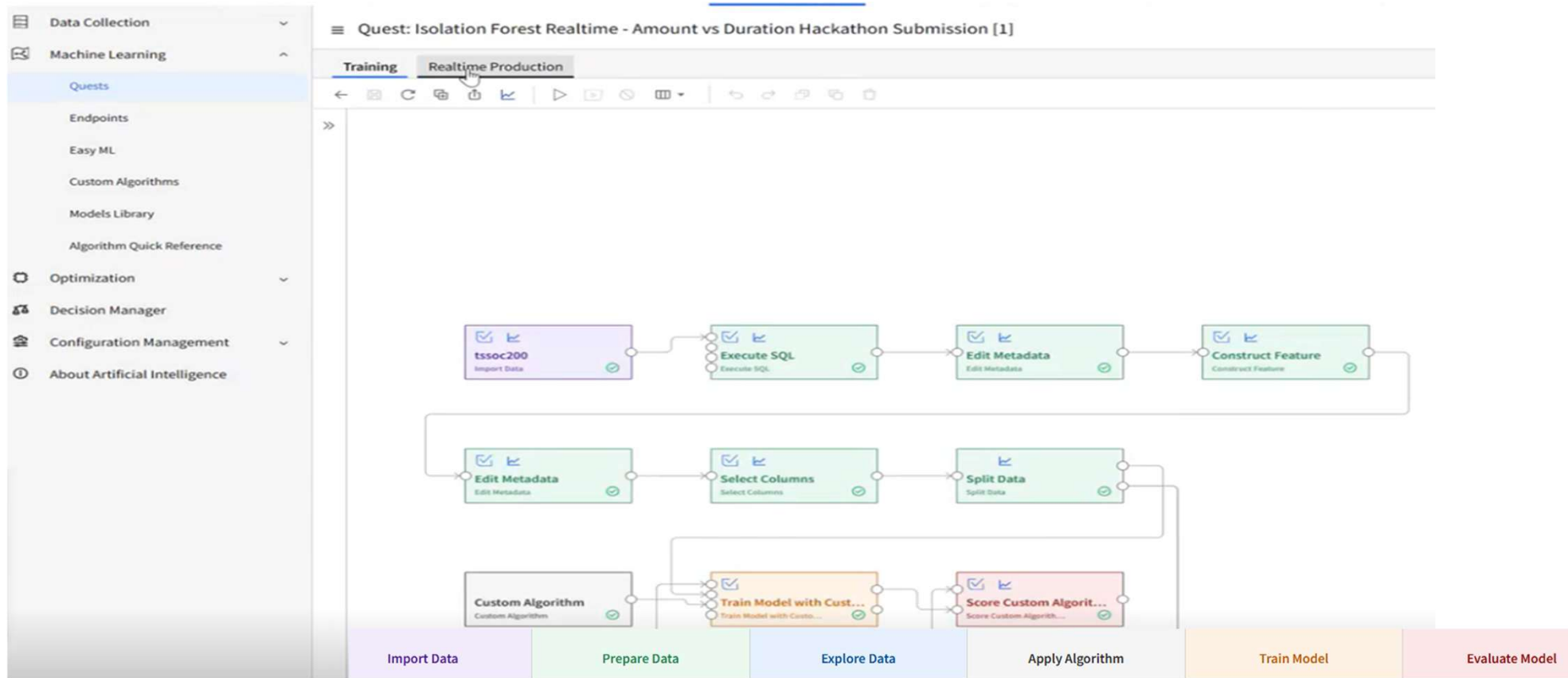


**Datasets (Source ERP LN)**

Table Name	Code
Service Order	Tssoc200
Service Order Activity	Tssoc210
Service Order Material Cost	Tssoc220
Service Order Labor Cost	Tssoc230
Service Order Other Cost	Tssoc240



# Platform Features : Easy drag & drop interface



# Platform Features: Native support for Jupyter Notebook

The screenshot displays the MLOps platform interface. On the left is a navigation sidebar with categories like Data Collection, Machine Learning, and Custom Algorithms. The main workspace shows a Jupyter Notebook titled 'Anomaly\_Detection' within a 'Custom Algorithm: IsolationForest' environment. The notebook contains three code cells for importing libraries, loading a dataset, and displaying its structure. The interface includes a top navigation bar with 'Train', 'Predictor', and 'Hyperparameters' tabs, and a bottom status bar with 'Order Number', 'Service Order', 'Completion Times', and 'Costs'.

Custom Algorithm: IsolationForest

Python 3.12 ✓ [Package Files](#) ↑ Dep

Playbook Train Predictor Hyperparameters Instructions

Jupyterhub Anomaly\_Detection (autosaved) Control Panel

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel) ○

```
In [6]: # Import libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.ensemble import IsolationForest

In [7]: # Load the dataset from the provided path
dataset_path = './datasets/697643e8-9874-482b-8c20-36025ccc6582/dataset.csv'
df = pd.read_csv(dataset_path)












In [8]: # Display the first few rows of the dataset to understand its structure
print(df.head())
```

Order Number Service Order Completion Times Costs

# Platform Features: Out of the box models

Activity Catalog Q × Cancel

Apply Algorithm

 XGBoost +	 Auto Clustering +	 Random Forest +
 Extra Trees +	 Multilayer Perceptron +	 K-Means +
 Decision Tree +	 DeepAR +	 Linear Learner +
 Principal Component Analysis +	 Custom Algorithm +	

# The Triumph: Real-World Impact

- With Augmented AI solution, Sarah's team reduced downtime, improved resource allocation, better efficiency and increased customer satisfaction. But this isn't just Sarah's success story - it's a glimpse of what's possible for all of us.
- Manufacturing Industry:
  - \* Predict equipment failures.
  - \* Reduce unplanned downtime.
  - \* Saved millions in repair costs.
- Logistics Sector:
  - \* Optimize technician schedules
  - \* Improved on-time service delivery.



# Beyond Sarah: Industry-Wide Potential

- **Demand Forecasting & Inventory Optimization**
  1. **AI-driven predictions:** Analyzing historical sales data, market trends, and external factors (weather, economic shifts) to forecast demand.
  2. **Real-time inventory optimization:** AI adjusts stock levels dynamically to avoid overstocking or stockouts.
- **Supplier & Procurement Intelligence**
  1. **Smart supplier selection:** Assess supplier reliability based on past performance, delivery times, and risk factors.
- **Predictive Maintenance**
  1. **AI-driven equipment monitoring:** IoT sensors collect data to predict machine failures.
  2. **Reduced downtime:** AI suggests maintenance schedules based on usage patterns.





# KEY TAKEAWAYS



- Augmented AI can enhance your Infor ERP LN with predictive capabilities.
- It enables proactive maintenance, smarter resource allocation, and happier customers.
- It enables you to turn the reactive chaos to proactive efficiency
- And most importantly, it's a solution that's ready to transform your operations today.

# Thank you



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