

Sight Machine Filler Agent

Real-time agentic insights that improve availability and throughput for food and beverage manufacturers

In food and beverage manufacturing, Liquid Fillers are crucial assets for bottling water, juices, carbonated beverages, beer, wine, sauces, and dressings. These large, complex, expensive machines are often the bottleneck of the manufacturing line.

Manufacturing process engineers recognize that optimizing filler performance is essential for overall line efficiency. Even modest, single-digit improvements at the Filler can generate substantial financial benefits, often worth hundreds of thousands of dollars annually.

How the Filler Agent Works

The Filler Agent uses a multi-agent architecture, with an orchestrator agent, a Downtime agent and a Throughput agent. Each agent uses pre-validated machine learning (ML) tools to ensure that the results are highly accurate.

The Filler Agent generates relevant and meaningful insights such as:

- Data values and trends over time for Filler KPIs
- Root cause analysis of issues at the Filler
- Simulation of real-world scenarios such as predicting throughput when a certain process parameter value changes.

Built on Azure AI Foundry Agent Service, this agent delivers real-time insights and predictive analytics to shop floor teams through a natural language interface, without requiring data science expertise. It also supports MCP, enabling easy integration with other AI applications.

Our Microsoft collaboration ensures scalability, security and reliability to transform bottling operations into improved throughput.

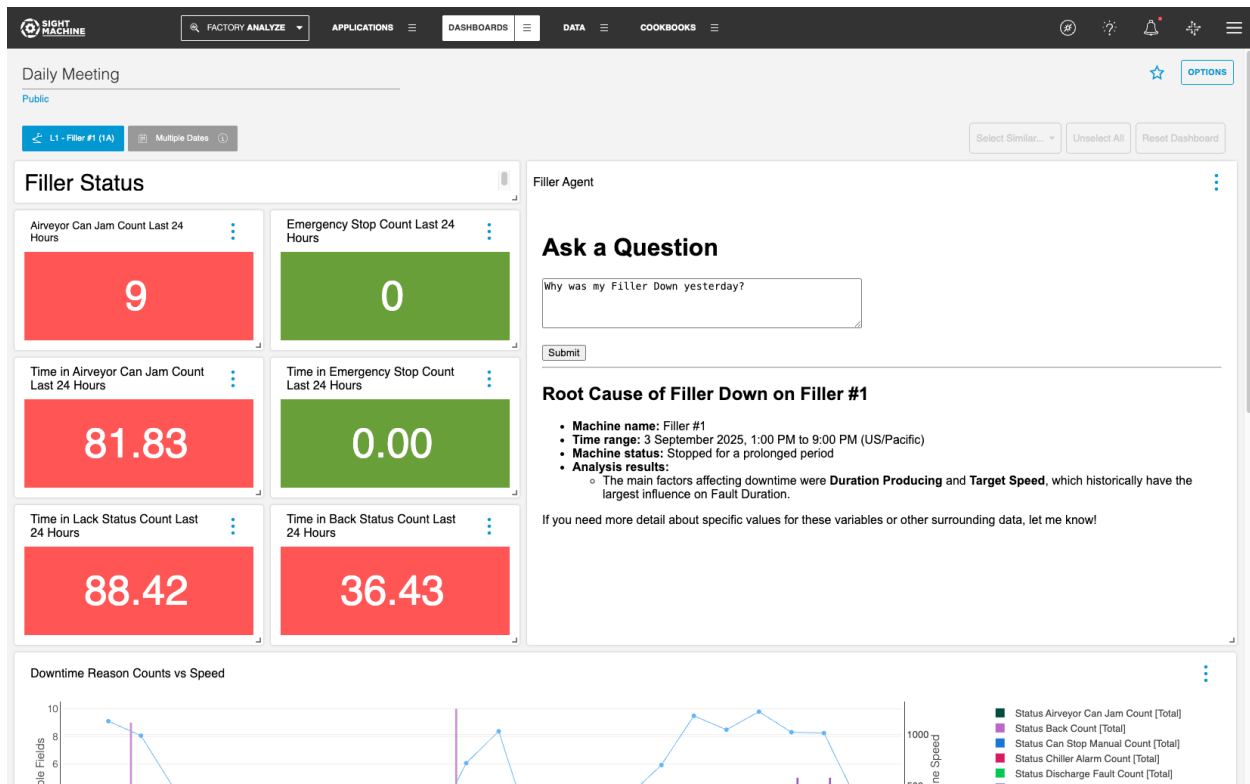
Accessing the Filler Agent

The Filler Agent operates in two modes:

1. It is “always on” in the background, constantly monitoring the real-time stream of data from the manufacturing floor, identifying unusual data patterns, and sending alerts to machine operators with suggested changes
2. It provides a Copilot interface for process engineers and operators to ask questions—phrased in manufacturing terms and not requiring AI expertise. Questions such as “Why was my Filler down yesterday?” or “What would my USLE on Line 2 have been if it was running at my optimal Line Speed?” deliver quick and relevant answers to teams to help them optimize the line in real-time.

In all cases, the agent is responsible for planning and executing the analytics strategy and communicating the results to the operator or engineer.





All recommendations are surfaced directly in the Sight Machine UI and also integrated into a 3D Digital twin, built with OpenUSD and NVIDIA Omniverse technologies and rendered in real time with NVIDIA A10 RTX GPUs on Azure.