SLK

Knock the Door in Advanc Maintenance of HVAC Sys Plants

Preventive maintenance of HVAC systems at losses by 67%

Case Summary

A large fortune 100 manufacturer was dealing with the HVAC maintenance schedule and usage resulting in operational losse perishable food items.

SLK co-innovated with the customer to identify the top critical previous failure data to predict HVAC machine failures ahead o

The Challenge

The client was tackling increased losses from perishable shrinkage due to malfunctioning HVAC systems. Though their facilities had an existing installed E2 energy management system that generated alarms, the store personnel often did not have the expertise or time to analyze the alarms and respond appropriately. They wanted a system that could help them proactively maintain their HVAC systems without having to increase their workforce. The new system had to predict a failure in advance and trigger an alarm at least two days before it for timely and economical maintenance. They partnered with SLK to co-create this solution.

The Solution

The SLK team identified the ten most critical alarms for HVAC systems and built a system to predict failures two days in advance. The system was built on the Microsoft Azure Services Platform with end-to-end solution ownership. The platform uses transmitter and sensor log data to identify constraints and influencing factors and has inbuilt algorithms to predict faults before an alarm triggers. This predictive analysis is done through Supervised Learning Multi-Class classification model. Connecting over two million devices, the system highlights 10+ critical alerts and factors on real-time intuitive dashboards.

Business Impact

67%
Reduction in food
loss expenses

99%
Unkeep

35%
Reduction in
operational costs

SLK's Efforts Showed Quick Results:

The new system helped the client predict maintenance needs and keep the HVAC systems running smoothly.

- The system connected two million devices for 24/7 monitoring and triage of alarms
- Pre-empting maintenance needs helped the client optimize the maintenance schedule and reduce costs by 35%
- A well-running HVAC system reduced loss due to perishable shrinkage by 67%

Write to us at hello@slkgroup.com

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www.slksoftware.com