

CUSTOMER CASE STUDY

ML Core and Predictive Modeling

BKOAI's ML Core streamlines the development of real-time predictive models through an accessible automated machine-learning workflow.

Industry: Downstream

GOALS

- Simplify the creation of predictive models using automated machine learning workflows.
- Deliver accurate real-time data predictions through an intuitive operator interface.
- Reduce the effort required to train, deploy, and manage predictive models.
- Make predictive insights easier to use within day-to-day industrial operations.

SOLUTIONS

- Use AutoML to simplify model training and model selection through an accessible workflow.
- Apply template-driven contextualization to standardize asset analytics and data preparation.
- Tune predictive models to plant-specific operating characteristics and historical data patterns.
- Embed model outputs into existing platforms such as Seeq and AVEVA PI for real-time use.

CHALLENGES

- Fragmented industrial data requires preparation before it can support model development.
- Generic machine-learning models may not capture plant-specific operating behavior.
- Preparing data and configuring predictive models requires time and specialized expertise.
- Model outputs must be accessible within operators' existing workflows to support their use.

RESULTS

- Provided predictive alerts to support proactive operator responses.
- Made model outputs accessible through integrated dashboards.
- Standardized asset analytics through reusable templates.

EXECUTIVE SUMMARY

BKOAI's ML Core streamlines the development of real-time predictive models through an accessible automated machine-learning workflow. The solution combines AutoML, template-driven contextualization, plant-specific model tuning, and integration with platforms such as Seeq and AVEVA PI. This makes predictive modeling easier to operationalize, provides real-time visibility into model outputs, and supports earlier interventions using predictive alerts.

Preparing Industrial Data for Predictive Modeling

Fragmented industrial data must be prepared before it can support model development, and generic machine-learning models may not reflect plant-specific operating behavior. Preparing data and configuring predictive models can also require significant time and specialized expertise.

AutoML, Contextualization, and Plant-Specific Models

ML Core uses AutoML to simplify model training and selection, while template-driven contextualization standardizes asset analytics and data preparation. Models are tuned to plant-specific operating characteristics and historical data patterns rather than relying only on generic behavior.

Results

The current results are: predictive alerts support proactive operator responses; model outputs are accessible through integrated dashboards; and asset analytics are standardized through reusable templates.

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