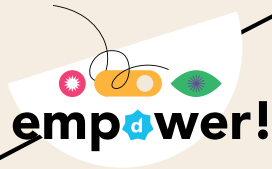
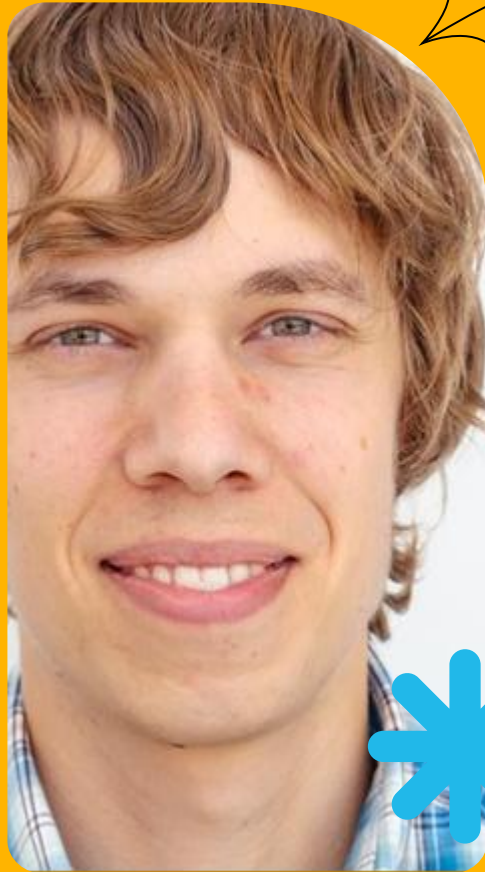


Welc**d**me



[YOUR TRAINER THIS SESSION]

Principal AI
DevOps
Engineer

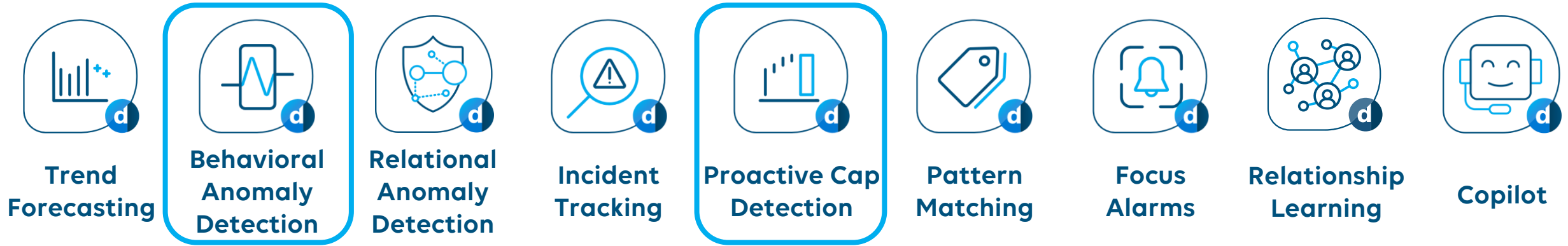


Tobe
Deprez

tobe.deprez@skyline.be

Enhancing DataMiner AI with Human Feedback

What's on the menu?



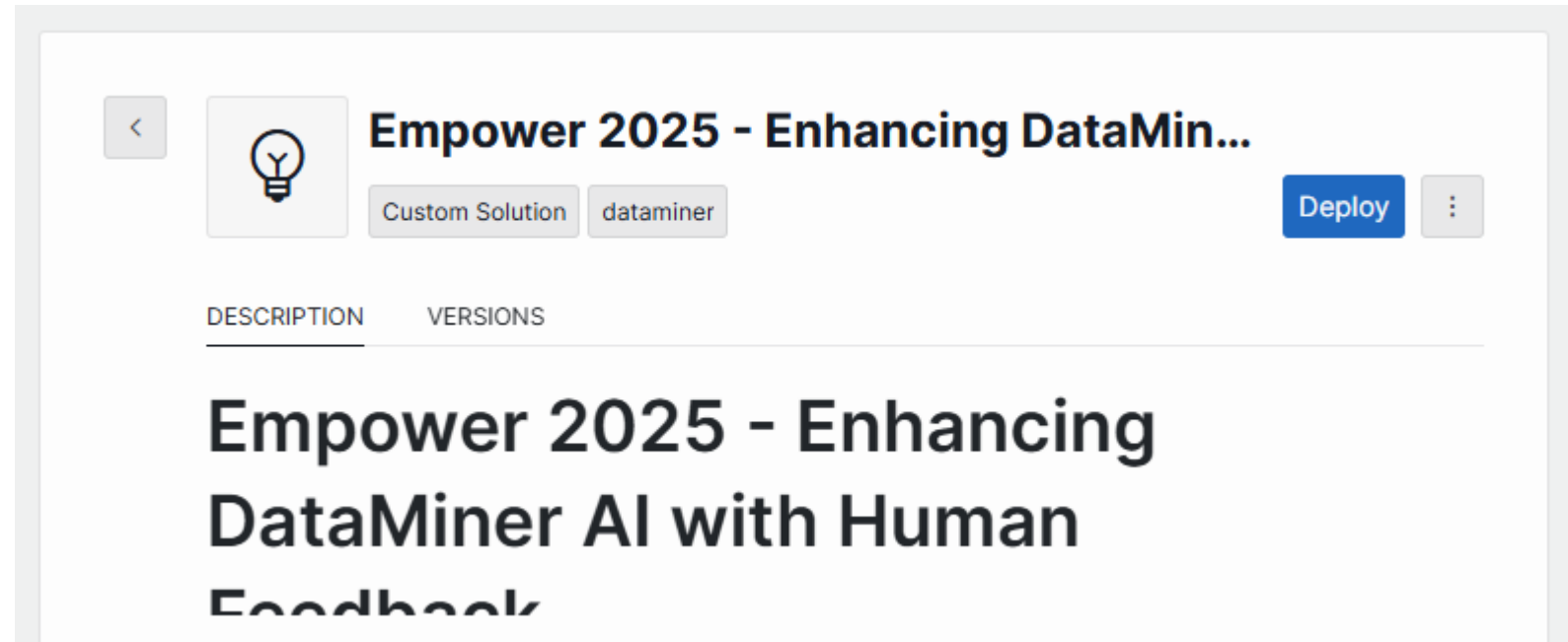
- **9 features** leveraging state-of-the-art **big data** and **artificial intelligence (AI)**

➡ **Assists** you in your daily operations

- **Human feedback** ➡ better notifications

Install your demo's!


- Go to 'catalog.dataminer.services'
- Search for '[Enhancing DataMiner AI with Human Feedback](#)'
- Hit '[Deploy](#)'



Behavioral Anomaly Detection

Behavioral Anomaly Detection

What?


 i.e. weird / unexpected

Detects when single metric in DataMiner **behaves** in an **anomalous** way

- Runs on every (numeric) trended parameter
- Real-time

Behavioral Anomaly Detection

What?

 i.e. weird / unexpected

Detects when **single** metric in DataMiner **behaves** in an **anomalous** way

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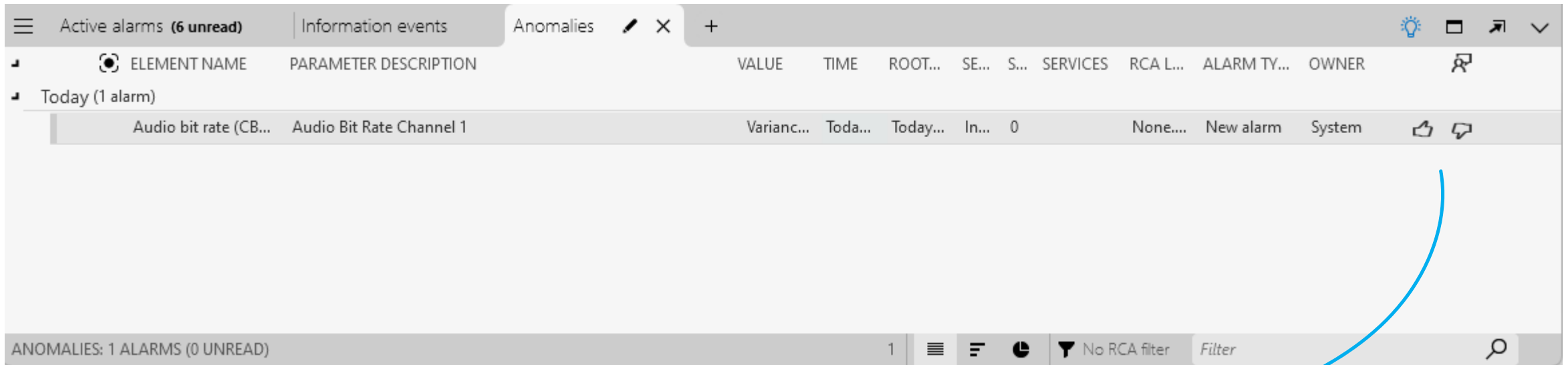


Relational Anomaly Detection: detects when usual relation between **multiple** parameters is broken

- Available since 10.5.3 / 10.6.0
- See session “Monitoring Multiple Metrics as One”

Behavioral Anomaly Detection

Giving feedback to DataMiner



Active alarms (6 unread) Information events Anomalies											
	ELEMENT NAME	PARAMETER DESCRIPTION	VALUE	TIME	ROOT...	SE...	S...	SERVICES	RCA L...	ALARM TY...	OWNER
Today (1 alarm)											
	Audio bit rate (CB...	Audio Bit Rate Channel 1	Varianc...	Toda...	Today...	In...	0		None...	New alarm	System
ANOMALIES: 1 ALARMS (0 UNREAD) 1 [Icons] No RCA filter Filter											

Give **feedback** on anomalies



Gradually improve detection

Behavioral Anomaly Detection

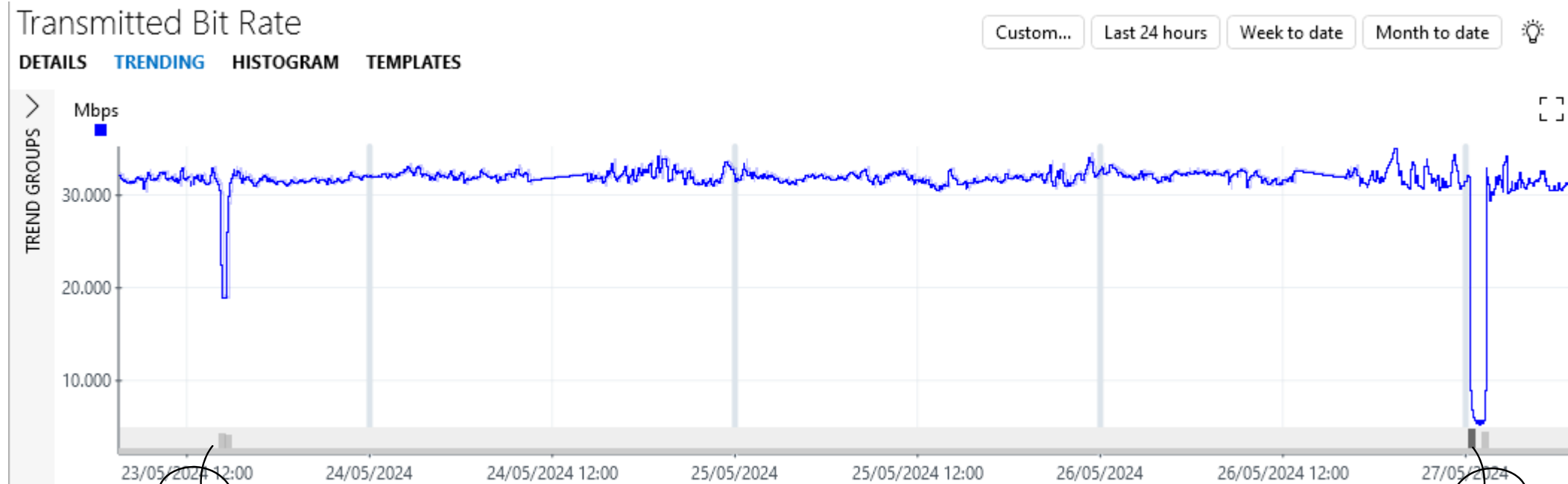
Exercise

On the element '**Empower 2025 – AI – Audio bit rate**'

1. Press the button 'Generate channels 2, 3 and 4'
2. Give negative feedback on all level shift anomalies
3. Press button 'Generate channel 5'
4. No level shift anomaly is generated anymore

Behavioral Anomaly Detection

Change point vs anomaly



Change point

Any change in behavior

Grey square under trend graph

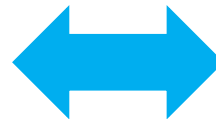
No event

Anomaly

Only severe / unexpected changes

Black square under trend graph

Suggestion event (or alarm)



Behavioral Anomaly Detection

Scope of feedback

- Given **per user**
 - Any user (who sees the alarm) can give feedback
 - User A and user B can give conflicting feedback
- Applies on **all instances** of parameter on your system, i.e.
 - Other cells in the same table column
 - Other element with the same protocol

➡ **Aggregated** to decide whether to trigger anomaly

Behavioral Anomaly Detection

Feedback and alarm template configuration

The screenshot displays the DataMiner interface. At the top, there's a navigation bar with tabs for 'Active alarms (3 unread)', 'Information events', and 'Anomalies'. Below this is a table of active alarms. The first alarm is 'Anomaly Feedback Tutorial - Task Manager (1 alarm)' with details: 'Memory Usage Google Chrome', 'Level increased by 365,7 MB...', 'Today 11:30:00', 'Today 11:30:00', 'Inform...', '0', 'None.Non...', 'New alarm', and 'System'. A button 'Improve alarm template...' is visible next to the alarm.

A modal window titled 'PROPOSED CONFIGURATION OF YOUR ANOMALY ALARM TEMPLATE' is open. It contains the following information:

- Anomaly Feedback Tutorial - Task Manager**
- Memory Usage (Task Manager) (Google Chrome)**
- Based on your feedback, we propose to configure alarming for level increases as follows. [See DataMiner Docs for more information.](#)
- Filter: *
- Select preset ▼
- Note that these settings only apply when anomaly detection is enabled in the trend template
- Level shift**
 - ☒ Level increases → Smart ▼
 - ☐ Level decreases → Smart ▼
- Outlier**
 - ☐ Upward spikes → Smart ▼
 - ☐ Downward spikes → Smart ▼

Hand-drawn arrows indicate the flow from the 'Improve alarm template...' button to the configuration modal.

Behavioral Anomaly Detection

Exercise

1. Press the button 'Generate Data' to generate data for **Google Chrome**
 1. Give **positive** feedback on the detected anomaly
2. Press the button 'Generate Data' to generate data for **Java Runtime**
 1. Give **negative** feedback on the detected anomaly
 2. Select '**Improve alarm template**' under the light bulb icon and accept the proposed alarm template
3. Press the button 'Generate Data' to generate data for **Microsoft Visual Studio**
 1. Give **negative** feedback on the detected anomaly
 2. Select '**Improve alarm template**' under the light bulb icon and accept the proposed alarm template
4. Press the button 'Generate Data' two more times and check the anomalies that are generated

Alarm Template Configuration

- ## Anomaly Alarm Settings

Close

FF HYST ON INF ANOMALIES

Disabled

A screenshot of the dataminer application interface. The 'General' tab is selected, and the 'Encrypt' checkbox is checked. The dataminer logo is visible in the bottom left corner.

Proactive Cap Detection

Proactive Cap Detection

What?

- Makes **prediction** of every (numeric) trended metric
- Notifies you when a metric will **cross a boundary** in the **near future**
 - Suggestion event (or alarm, if configured) in '**Predicted alarms**' tab
- Which boundaries?
 - Range limits (as defined in protocol)
 - Alarm thresholds: by default **critical**
 - System-wide: *System Center* under *System Settings* > *Analytics config* > *Proactive Cap Detection*
 - Per parameter: in alarm template

Proactive Cap Detection

Alarm Template Configuration

Turn
proactive
alarming
on/off

Augmented Operations Alarm Settings

Note that the settings below only apply when the corresponding feature is enabled in the trend template

☐ Slope increases

☐ Slope decreases

Flatline

☐ Detect flatlines

PROACTIVE ALARM SETTINGS

☒ Create an alarm if the trend prediction goes towards a certain threshold.

Thresholds to take into account: Critical High (-10.00 dBm)

Severity of the alarm that is triggered: Minor

Close

Which **threshold** to monitor, cfr.

- Alarm thresholds
- Upper / lower bounds

Severity of resulting proactive alarm



Behavioral Anomaly Detection

Exercise

Open the element **Empower – AI – AMS Server**

Simulates **free disk space** parameter of a server with **lower limit 0 GB**

Goal: Configure **warning** alarm when free disk space **goes towards 0 GB**

Active alarms (1 unread) X Information events Masked alarms +										
ELEMENT NAME	PARAMETER DESCRIPTI...	VALUE	TIME	ROOT TIME	SEVERITY	SERVI...	SERVICES	RCA LEVEL	ALARM TYPE	OWNER
Today (1 alarm)										
Proactive Tutorial - A...	Free Disk Space C:	Predicted minimum value 0 GB...	Today 11:22:36	Today 11:22:36	Warning...	0		None.None....	New alarm	System

ACTIVE ALARMS: 1 ALARMS (1 UNREAD)

1 [Icons] No RCA filter Filter

[ASK AWAY]



Questions?

References



documentation

[DataMiner Augmented Operations | DataMiner Overview](#)

[Analytics Tutorials | DataMiner Tutorials](#)

[DataMiner KATAs | Bringing the Thunder](#)



demo

[Empower 2025 – Enhancing DataMiner AI with Human Feedback | DataMiner Catalog](#)

[Ziine Demo System](#)



feedback

Reach out to us via [Questions | DataMiner Dojo](#), [Feature Suggestions | DataMiner Dojo](#), or by sending us an email at ai@skyline.be



dataminer



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