

Detecção de anomalias nos preços no mercado de ações

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Trilha Inovação com dados em nuvem



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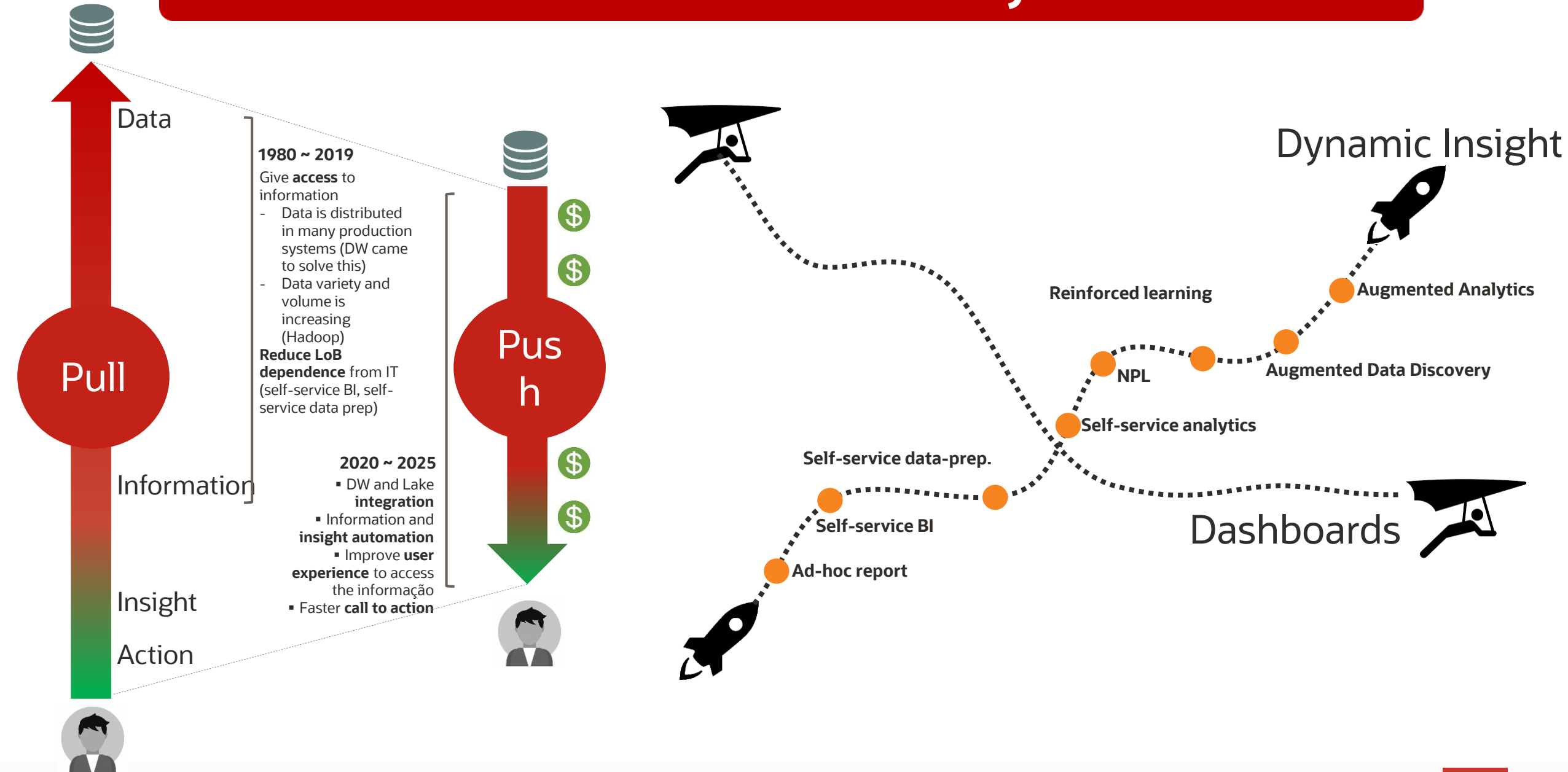


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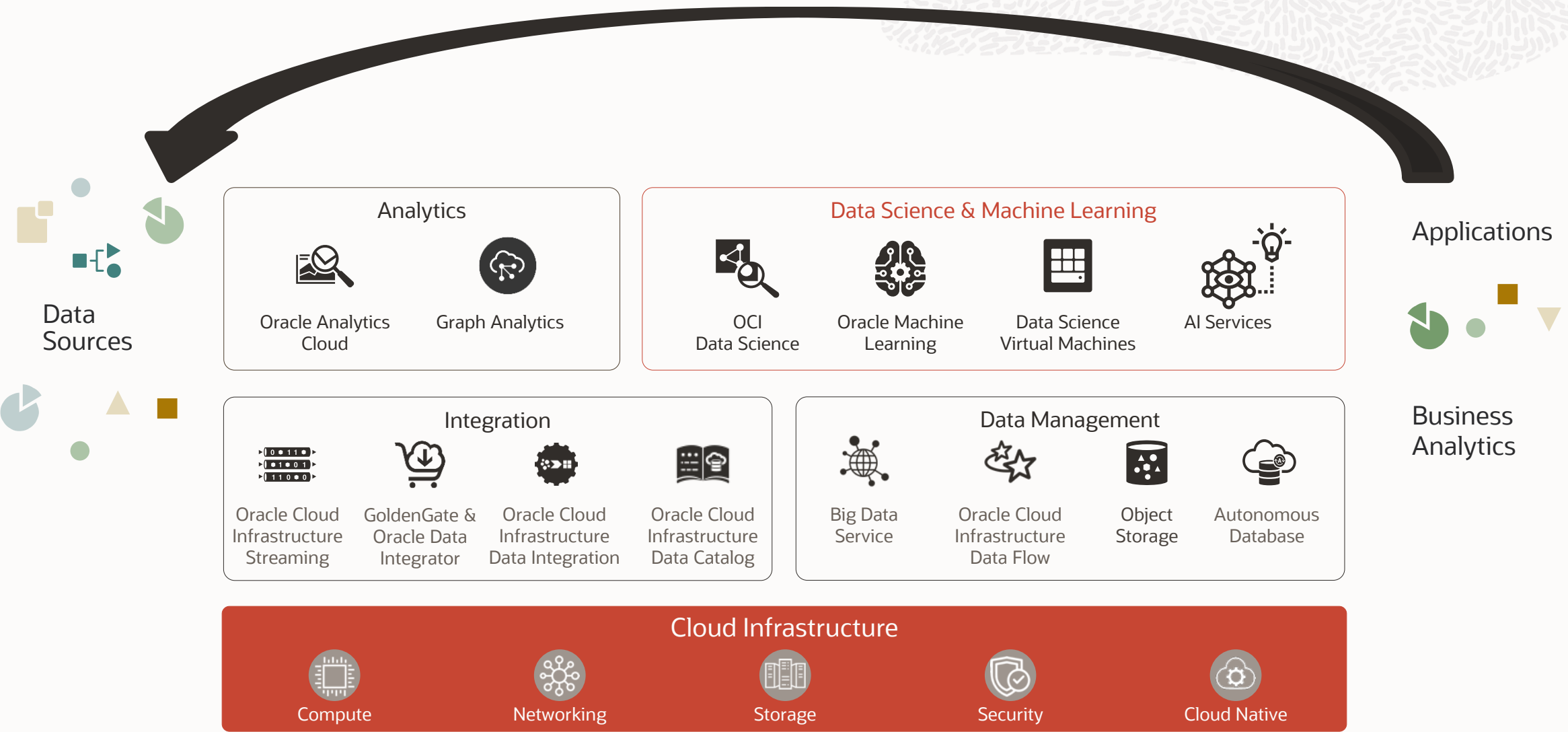
Agenda

- 1 Tendência em Data & Analytics
- 2 Soluções Oracle para Data Science
- 3 Anomaly Detection
- 4 Demo | Hands on

Future of Data & Analytics



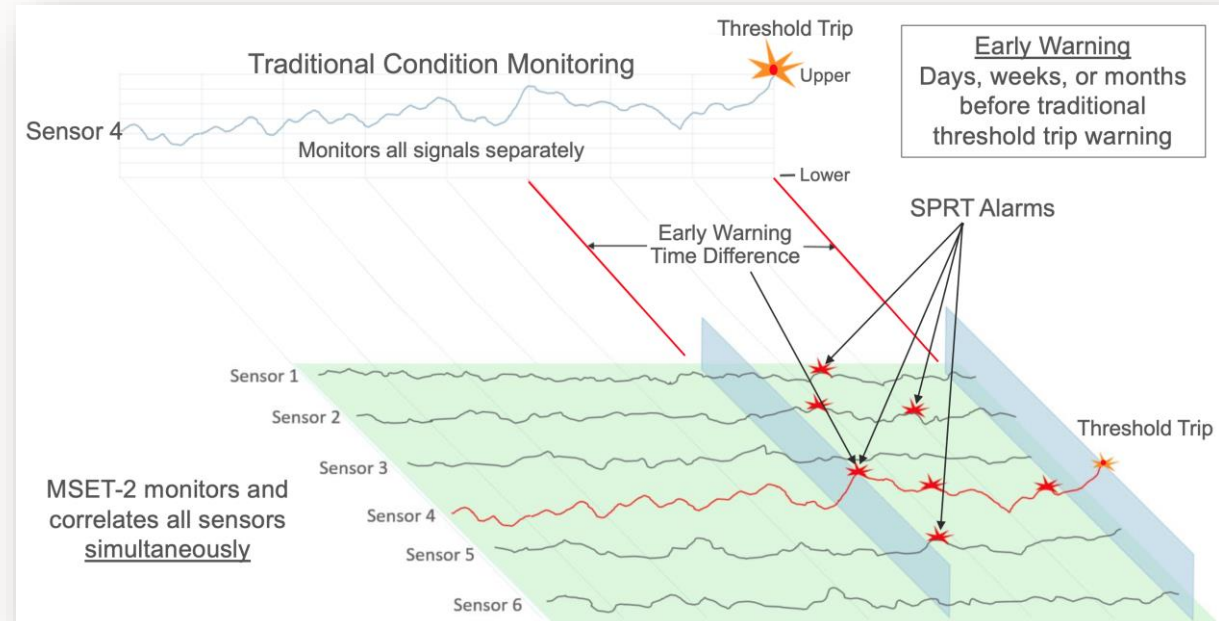
Oracle DS and AI Platform



What is OCI Anomaly Detection?

OCI Anomaly Detection provides developers with custom-trained, business-specific anomaly detection models that can indicate critical incidents deviating from the norm.

Detect anomalies at the earliest time with least number of false alarms using Oracle's heavily patented (150+ patents) MSET2 (Multivariate State Estimation Technique) algorithm



Anomaly detection market and use cases

\$5.45B

Market size by
2025

16%

CAGR from 2019
to 2025

Banking, Finance, Insurance

Abnormal purchases, deposits,
intrusions, fraudulent spend
and claims

Telecom

Service disruptions, revenue
fraud, service abuse

Healthcare

Claims and payments fraud,
real-time event analysis



Manufacturing

Cost overruns, shipment
delays, productivity loss

Transportation

Abnormal vehicle behavior,
shipment delays, cost changes

Oil & Gas, Utility

Abnormal consumption,
demand, system performance



Demo | Stock Price Anomaly Detection

Context

Oracle, Microsoft, AWS and Sales Force stock prices has high correlation due to the same tech market they compete.

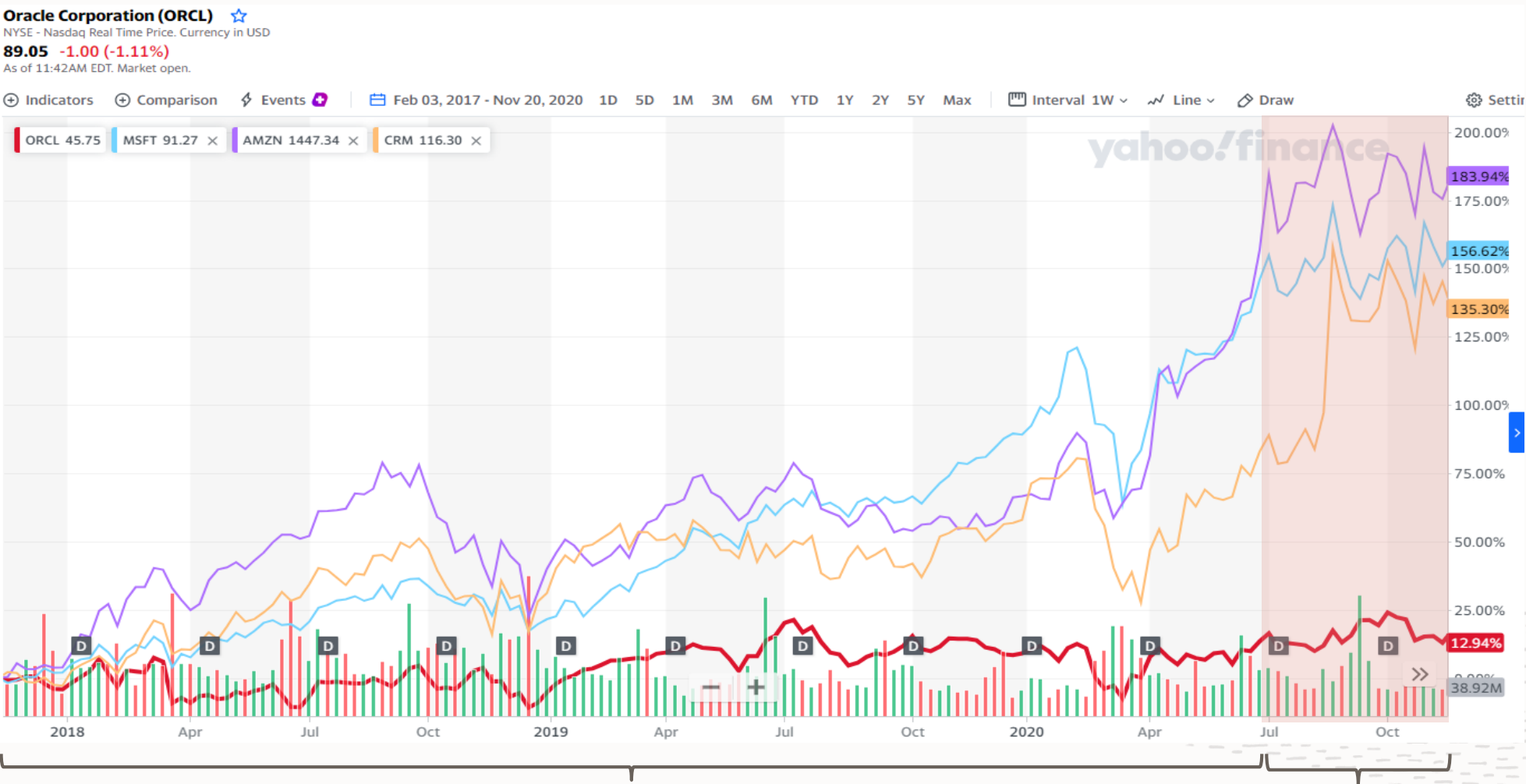
Goal

The goal here is not to predict stock prices, but to identify anomaly price changes of these companies due to relevant facts that impact only a single company (e.g. successfully release of new product, merge and acquisition announcements, etc).

Moreover, use also included dollar and gold prices. Dollar and gold prices don't have correlation with tech market prices, but we put them in the training data set to see the anomaly detection behavior.



Demo | Stock Prices



03/Feb/2017 a 30/Jun/2020
training

02/Jul/2020 a 20/Nov/2020
test



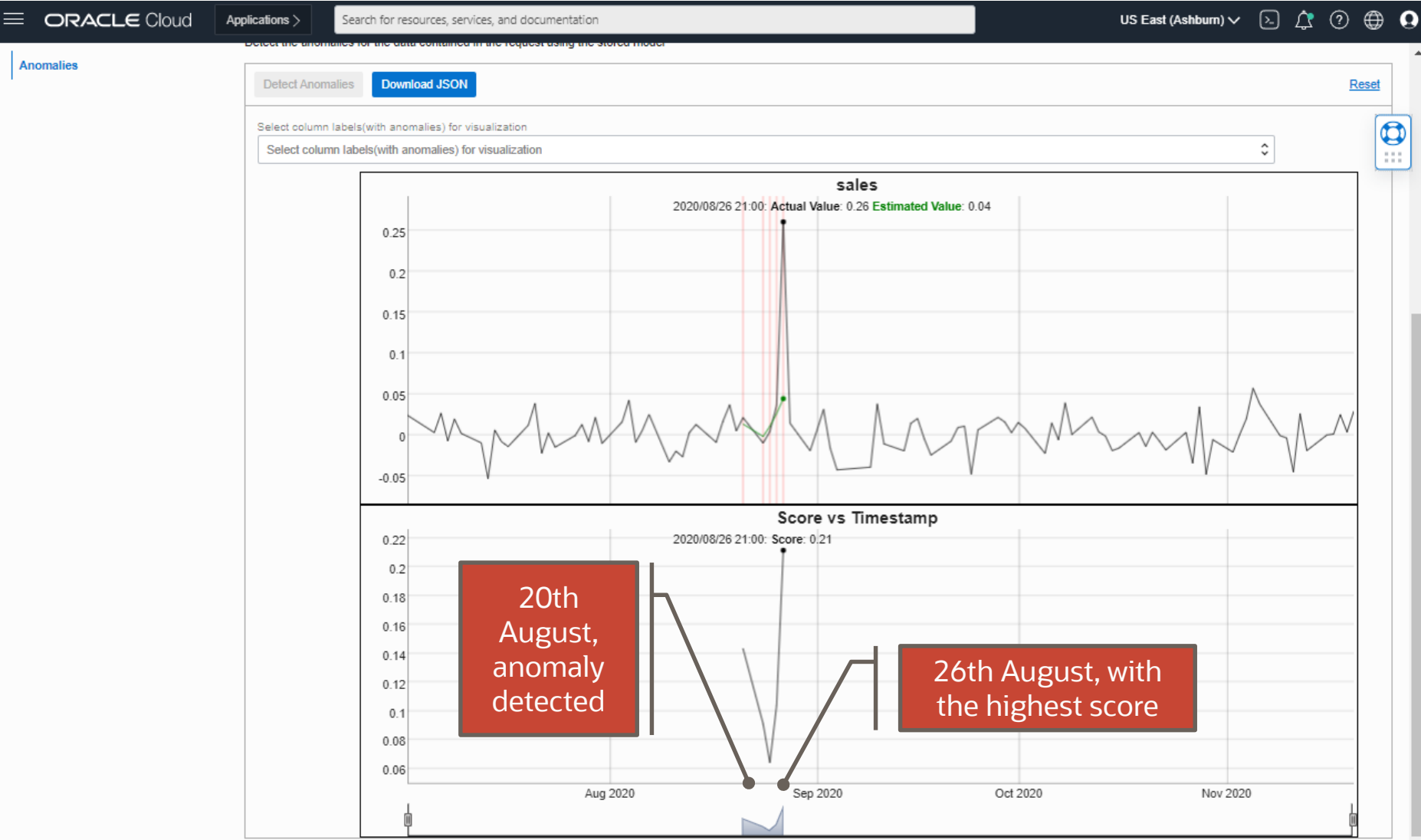
Demo | Training Phase

In the training phase, we notice that the anomaly detection services dropped gold and dolar variables according to our expectation.

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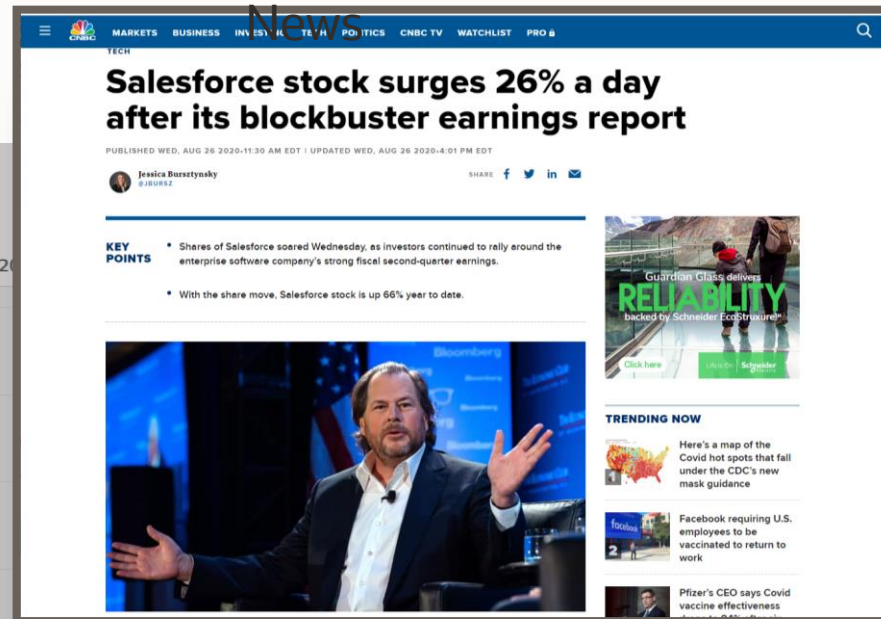


Demo | Running the Model



26th Aug, 2020

Demo | Examples



20th August, anomaly detected

26th August, with the highest score

03/02/2017 a 30/06/2020
training

02/07/2020 a 20/11/2020
test

Hands On

Oracle Cloud - Modo Gratuito

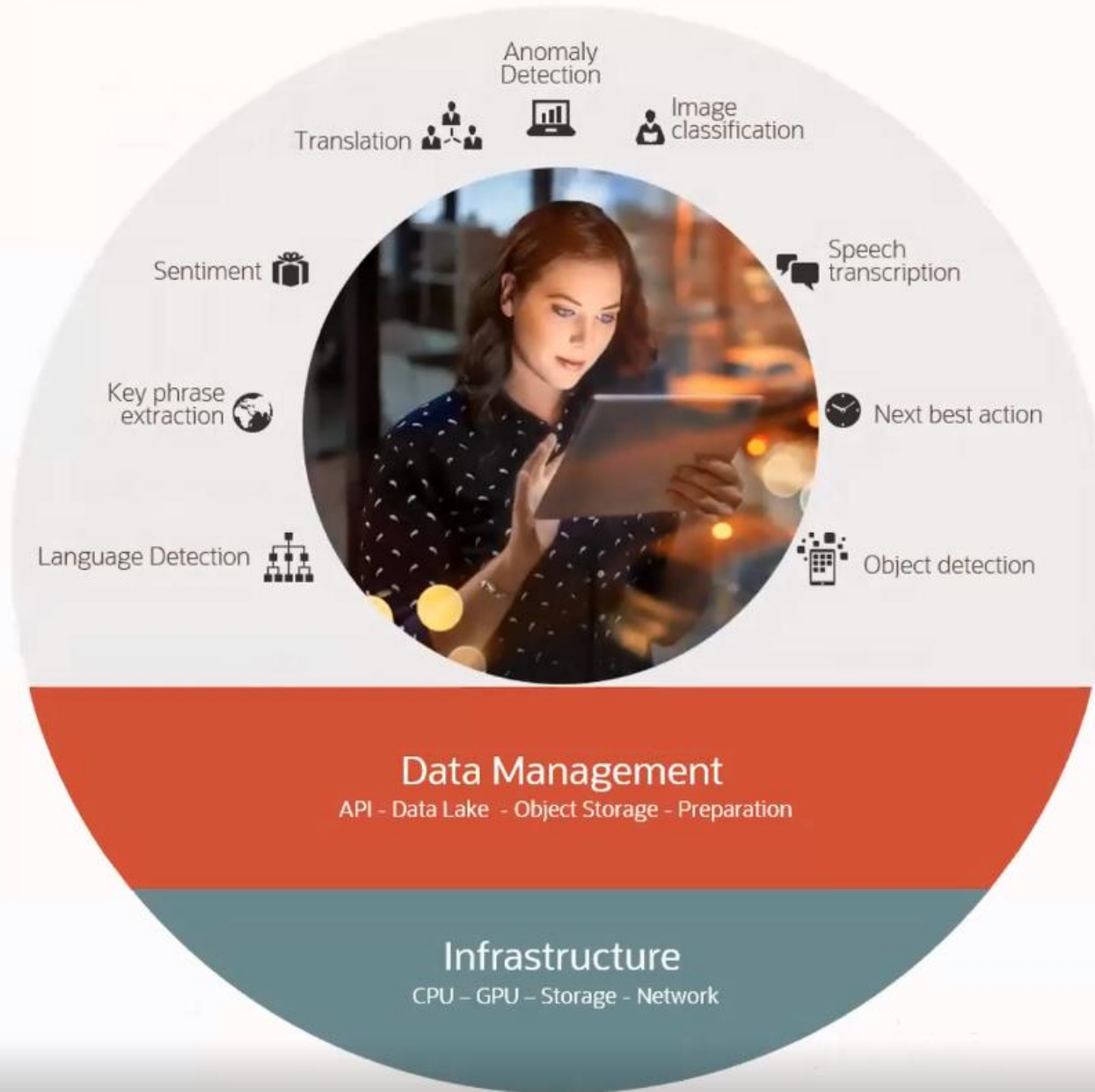
<https://www.oracle.com/br/cloud/free/>

Anomaly Detection documentation

<https://docs.oracle.com/en-us/iaas/anomaly/using/data-require.htm>



What else?



OCI AI Services

Language

Easily add language processing capabilities to solve common enterprise needs

Speech

Support for speech transcription, text to speech, translation, recognition

Vision

Document and form understanding, OCR, object detection, classification

Decision

Anomaly detection, time-series forecasting, fraud detection, next best action

Vamos juntos nesta trilha!



linkedin.com/groups/8984009



youtube.com/c/Inovaçãocomdadosenuvem



anchor.fm/inova-dados-nuvm



github.com/taborda-cbip/inovacao-com-dados-em-nuvm