

# Fuel BigData

Solution - IPTV & APi - Anomaly Detection

# Solution - Data Source Agnostic

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*Abnormal Pattern Detection, what is it?* It is a detection of patterns of data that deviate from your other normal data patterns. It can be used to help understand causes of failures, abnormal patterns and to detect unfrequent usage patterns typical of fraud.

*How can it be used over a Video Delivery Service?* Analysing logs of Web Api, STBs or 3rd party providers can help detect abnormal patterns in use cases like; content distribution, network anomalies, CDN and cloud infrastructure anomalies. This type of service can help you reduce your spend over CDN network buffering, CDN rotation and help you to identify intrusion or fraud.

# Abnormal Detection - Requirements

- Bring your trustable source dataset
- Bring the same data source for all use case analysis, conform to data consistency
- Requires a numerical distributions on the data. Quantitative analytics drives better quality analytics
- If numerical distributions are not present, it can be built (convert api log to NGram)
- Process : Static Analysis -> Build Pipeline
- Analysis starts in one subset of the data
- When subset analysis are stable, expand iteratively up to built a 1st data pipeline
- Pipeline when robust and quality checked with A/B test, can be used to trigger abnormal pattern detections, and alert 3rd party systems



# Follow our FAaS



Framework-As-a-Service

# Find your Anomalies

The screenshot shows a web-based interface for a data lake notebook. At the top, there's a navigation bar with a home icon, a search bar containing 'bigdata.lake:8888/notebook/editor?editor=185', and various utility icons. Below this is a blue header with 'HUE' branding and menu items like 'Query Editors', 'Data Browsers', 'Workflows', and 'Search'. A secondary bar contains 'SQL' and 'Browse' options.

The main content area is split into a left sidebar and a right workspace. The sidebar lists tables under a 'default' schema, including 'cust', 'media\_3rdparty\_activity', 'media\_demo\_customer', 'media\_demo\_movielog', 'movie', 'movie\_rating', 'movie\_updates', 'movie\_view', 'movieapp\_log\_avro', 'movieapp\_log\_json', 'movieapp\_log\_month\_avro', 'movieapp\_log\_month\_parquet', 'movieapp\_log\_odistage', 'movieapp\_log\_stage', 'movielog', 'session\_stats', and 'user\_movie'. The workspace contains a SQL editor with the following code:

```
1 SELECT * FROM `iptv`.`avgbitrate_predict` LIMIT 10000;  
2  
3 select * from iptv.avgbitrate_predict where average_bitrate_kbps in (1379)
```

Below the editor, there's a 'Results' section. It shows a bar chart for the query 'avgbitrate\_predict.average\_bitrate\_kbps'. The Y-axis ranges from -1.36791 to 14.25542. The chart displays a series of bars representing data points. One bar, representing the value 1379, is significantly taller than the others and is circled in orange. A speech bubble points to this bar with the text 'Anomaly?'. The chart also includes a legend for 'avgbitrate\_predict.predict\_average\_bitrate\_kbps' and a 'SORTING' section at the bottom.

# 99.99%

Confidence in your model prediction results

With trustable algorithms applied, covering more than 95% of the use cases in a pipeline, you can have up to 99.99% confidence in our results

# Thank You !

Contact us

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