PRODUCT SHEET DIAGFIT
DiagFit is a software that predicts industrial equipment failures in blind mode.
Blind mode means that the creation of models is done by learning on the healthy operating data of the equipment.

The principle:

• For a given piece of equipment, a model is built on the basis of operating data in normal or “healthy data” mode. The model defines the equipment normality space.
• The data are those obtained from physical sensors in the form of "time series".
• The model is validated on the detection of a few occurrences of failures. The number of failure occurrences required to validate the model is much lower than if the model were to learn from all possible failures.

Operation in two modes:

1) "BUILD" mode:
• Consists of creating the prediction models from healthy training data and validating it on a few occurrences of failures

2) "RUN" mode under user control:
• It is in this step that the equipment is monitored by the predictive model. In this phase alerts are triggered if an anomaly is detected. An indication of the type of anomaly is provided if it is listed.
• Feedback from the maintenance operator on raised alerts enables the list of anomalies to be enriched.
• Prediction results are displayed, can be saved and / or exported.

Technical features

- Micro-services web architecture
- Separated Backend and Frontend
- Supported input types: csv files or listening in real time
- REST API with documentation interactive online
- Alert notification by MQTT protocol
- Administration tool
Features

Data pre-processing
- Automatic detection of input format
- Support for cyclic and non-cyclic data
- Data cleaning

Multi-equipment diagnostics
- Offline / online mode
- Interactive management of diagnostic sessions
- Saving or exporting diagnostics

Managed entities
Objects, Object Types, Models, Datasets, Anomalies

Equipment monitoring
- Distance to normality curve
- Spider diagram for the characterization of anomalies
- Timeline of alerts

Predictive model creation
- Model created on the basis of healthy learning data
- Multi-sensor model with a global decision and a decision by sensor
- Learning performance metric
- Initialization of the anomalies directory
- Possibility to create several models for a piece of equipment
- Management of the model library

User feedback
- Indication of the type of anomaly with confidence score
- Labeling of alerts by the user
- Enrichment of the list of anomalies

Build mode: analysis of the model created
Run mode: user feedback

Implementation options

Cloud

On site

Integration into a third party application

* Run of predictive models in a micro controller: contact us

Minimum on-site configuration

Linux server with Docker

4-core Intel or AMD processor of at least 2 GHz

16GB of RAM

50 GB of disk space
Why choose DiagFit?

YOU HAVE AN INDUSTRIAL PLANT
Maximise your equipment availability and reduce production downtime.

YOU ARE AN EQUIPMENT PROVIDER
Optimise your after-sales maintenance costs and offer a value-added service to your customers.

YOU ARE AN EDITOR OF AN IoT PLATFORM
Add targeted and performant industrial solutions to your catalogue of services.