



I4Q INFRASTRUCTURE MONITORING (I4Q IM)

i4Q IM is a service for monitoring manufacturing lines, detecting imminent failures and providing alerts for failures in manufacturing processes.

i4Q IM Infrastructure Monitoring solution provides an ensemble of monitoring tools for smart manufacturing workload orchestration and predictive failure alerting, including monitoring the health of workloads and productively alerting and taking corrective actions when a predicted problem is detected.

i4Q IM supports industrial companies to reach autonomous operation in manufacturing environments. Specifically, i4QIM solution is a software toolkit which elaborates manufacturing data derived from multiple sources (sensors, other i4Q solutions). These data undergo processing to achieve synchronization, feature extraction, etc., in order to exploit the most critical information.



BENEFITS

- **Predictive Alerting**
- **Failure Detection**
- **Defect Elimination**

FEATURES

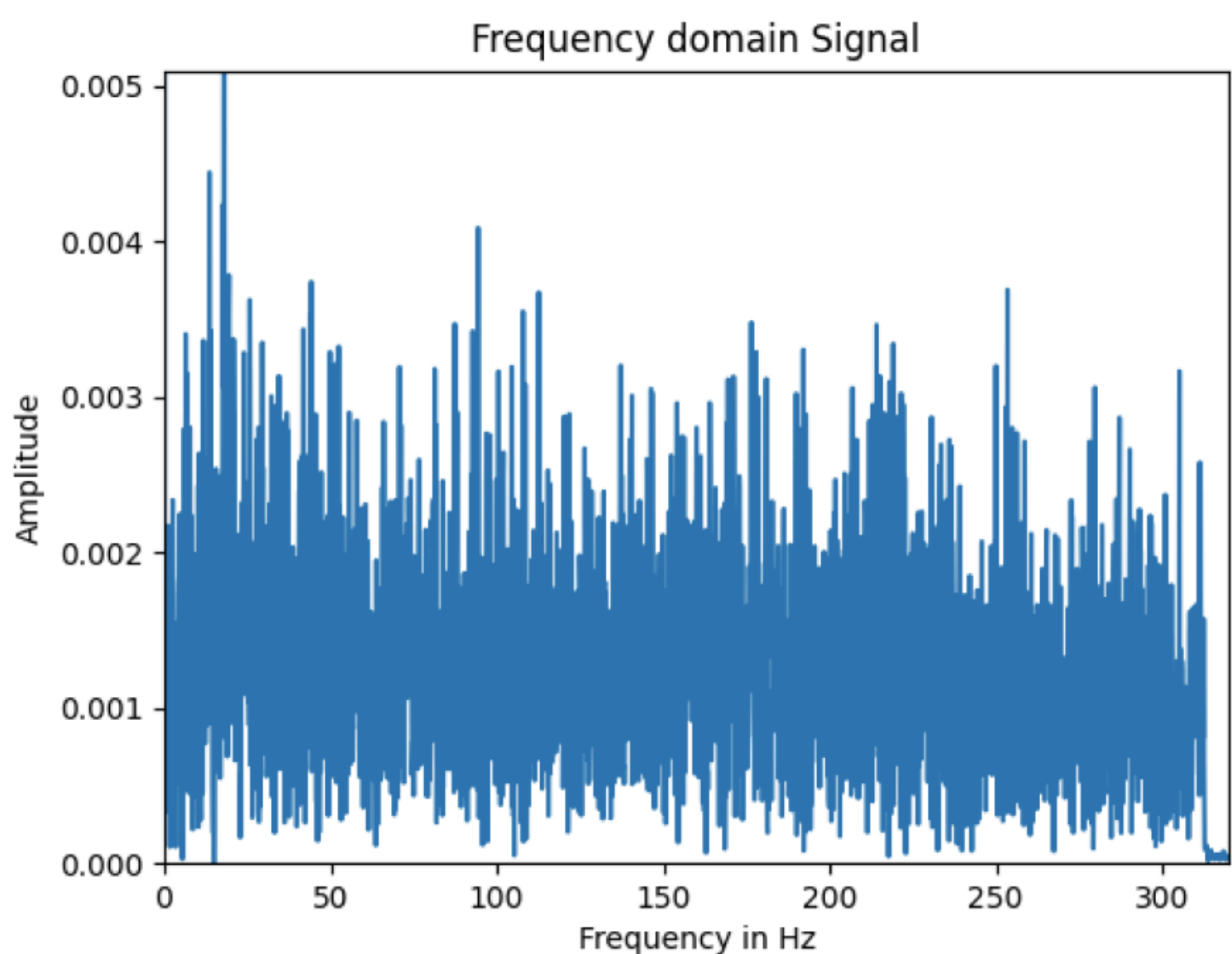
- Runs in parallel with other analytics solutions, in order to monitor their outputs and provide alerts if harmful events are detected.
- Runs as a standalone to process, monitor, analyse directly manufacturing data, and provide alerts about estimated harmful events.
- Apply certain rules during the analysis of manufacturing data to identify harmful events. This feature is related to the cases where tolerances and thresholds, defining normal functionality (or otherwise), are provided.
- Train and validate ML models using the training and the validation sets, respectively.
- Apply the trained model to real time input data (e.g., sensor signals), in order to detect an imminent problem on-the-fly.
- Initiate alerts about the detection or prediction of harmful events and alert other solutions if corrective actions should take place.
- Provide parameter configurations of the observations where a problem has been detected, in order to send them to other analytical solutions to apply the required machine parameters reconfigurations.



Industrial Data Services for Quality
Control in Smart Manufacturing

Use Cases

- fft
- Outliers
- Chatter
- Degradation





INDUSTRIAL DATA SERVICES FOR QUALITY CONTROL IN SMART MANUFACTURING

i4Q will help micro, small and medium European manufacturing enterprises overcome the hurdles preventing them from entering the Fourth Industrial Revolution 4Q will provide a complete solution to improve the quality of manufactured products aiming at zero-defect manufacturing, therefore pushing forward the concept of a smart, fully digitised factory.

4Q Project aims to provide an IoT-based Reliable Industrial Data Services (RIDS), a complete suite consisting of 22 i4Q Solutions, able to manage the huge amount of industrial data coming from cheap cost-effective, smart, and small size interconnected factory devices for supporting manufacturing online monitoring and control.

PUBLISHER

CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 958205. The content of this website does not represent the opinion of the European Union, and the European Union is not responsible for any use that might be made of such content.



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