

Accelerated modeling of anomalies and novel events for predictive maintenance

by Anne Menendez | Feb 12, 2019 | Application Notes | 0 comments



Smart sensors are driving the deployment of monitoring systems in our everyday lives from wearables tracking our mobility to complex sensor hubs ensuring the quality of a production line and the proper operation of its machinery. Their “smartness” comes from software running a pattern recognition engine and associated decision logic. In the case of predictive monitoring, the sensor needs to be paired with some higher intelligence capable of learning the novelties (objects or events) which are not recognized by the always-on recognition engine. Their detection cannot just call for a warning or actuation signal. Their recording would generate a large amount of redundant data and this solution is not practical for most sensory devices lacking storage capacity. Learning the novelties will enable the modeling of a spurious change, a temporary drift, or an irreversible trend, paving the way to intelligent decision-making.

This is where a NeuroMem® neural network becomes a real problem solver. **Unlike a Deep Learning engine, this network will admit when it does not know, which is the information of interest in predictive maintenance. It will be capable of learning in real-time (including new categories) and classify novelties.**

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