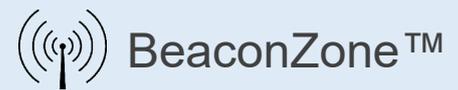


# SensorCognition™

Provides for transformative Internet of Things (IoT) and 'Industry 4.0' AI machine learning applications



## What does it do?

Hardware/software to collect Bluetooth® sensor data for machine learning and subsequently use AI machine learning models to bring about a step improvement in organisations' processes. Takes inputs from other systems as well as sensor data. Provides output to a web user interface on the same network and to other systems via standard industry protocols.

## How is it unique?

Serverless 'edge' sensing, machine learning device that works standalone without a server. Configured rather than programmed.

## Who is it for?

Organisations wishing to take advantage of AI machine learning insights based on sensor data such as movement (accelerometer), temperature, humidity, air pressure, light, magnetism (hall effect), proximity, heart rate, fall detection, smoke, gas and water leak.

One of the problems with IoT is the need to support different inputs and outputs for different IoT scenarios leading to solutions needing costly, complex and time consuming custom programming.

All of our edge devices run the **same software**. We configure and 'wire-up' pre-defined SensorCognition™ modules rather than creating a new program for each customer. This allows the same device and software to be used for collecting data for machine learning and later re-purposed for production. It provides for quickly changing functionality in response to evolving requirements. It allows us to spend more time on your solution rather than writing new software.

## Machine Learning Benefits

- Solves difficult business problems that can't be solved using traditional algorithmic programming.
- Finds patterns in data that can't be identified by humans.
- Can be used to DETECT conditions based on input sensor data.
- Can be used to CLASSIFY situations as belonging to different types, based on input sensor data.
- Can be used to PREDICT conditions based on the current immediately preceding sensor values.
- Solving business problems improves efficiency, saves costs, increases competitiveness and can even create new intellectual property for your organisation.

## Edge Device Benefits

- Removes the need for cloud storage of redundant data, saving cost and resources.
- Solves the problems of prohibitively large data transmission requirements dictated by higher sensor sampling frequencies.
- Brings computing much closer to, for example, patients, machines, customers, suppliers, employees, vehicles and buildings for quicker notifications.
- Secures your data as it doesn't go through, nor is held by, a third party. You are also not dependent on the reliability, availability and variable cost of a 3rd party service.

## Much More Than Edge, Sensing and Machine Learning

As well as sensor data, SensorCognition™ can also act on and combine data from MQTT, HTTP, WebSocket, TCP, UDP, Twitter, email, files and RSS.

SensorCognition™ also has an optional stand-alone web page dashboard, available on the local network, that can have buttons, charts, colour pickers, date pickers, dropdowns, forms, gauges, notifications, sliders, switches, labels (text), play audio or text to speech and use arbitrary HTML/Javascript to view data from other places.

SensorCognition™ processes the above inputs and outputs to files, MQTT, HTTP(S), Websocket, TCP, UDP, Email, Twitter, FTP, Slack, Kafka. It can also run external processes and Javascript.

## To Learn More

Contact us via our help desk to set up a free initial chat to determine if a SensorCognition™ based solution might benefit your organisation.

<http://bzone.click/support>

## Key Features

### Collects Sensor Machine Learning Data

Provides a way to collect sensor data for machine learning without use of a network connection or server.

### Uses Machine Learning Models

Allows learnt\* machine learning models to be used stand-alone, without a network connection or server (called inference).

### Provides Consistent Data Pre-Processing

Ensures the required, same, pre-processing of sensor data for model learning as for run-time inference.

### Interfaces with Other Systems

Connects to your or 3<sup>rd</sup> party systems for additional data input and/or output.

### Standalone User Interface

Dashboard web-based UI to control the device and/or to show output.

### 100% Configured, not Coded

Ready-made SensorCognition™ models are wired together, by BeaconZone (not end user configurable), using data, to create specific solutions.

\* the one-off process of machine learning on sensor data, to create models, is performed by BeaconZone using more powerful Cloud and/or local machines.



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BeaconZone™