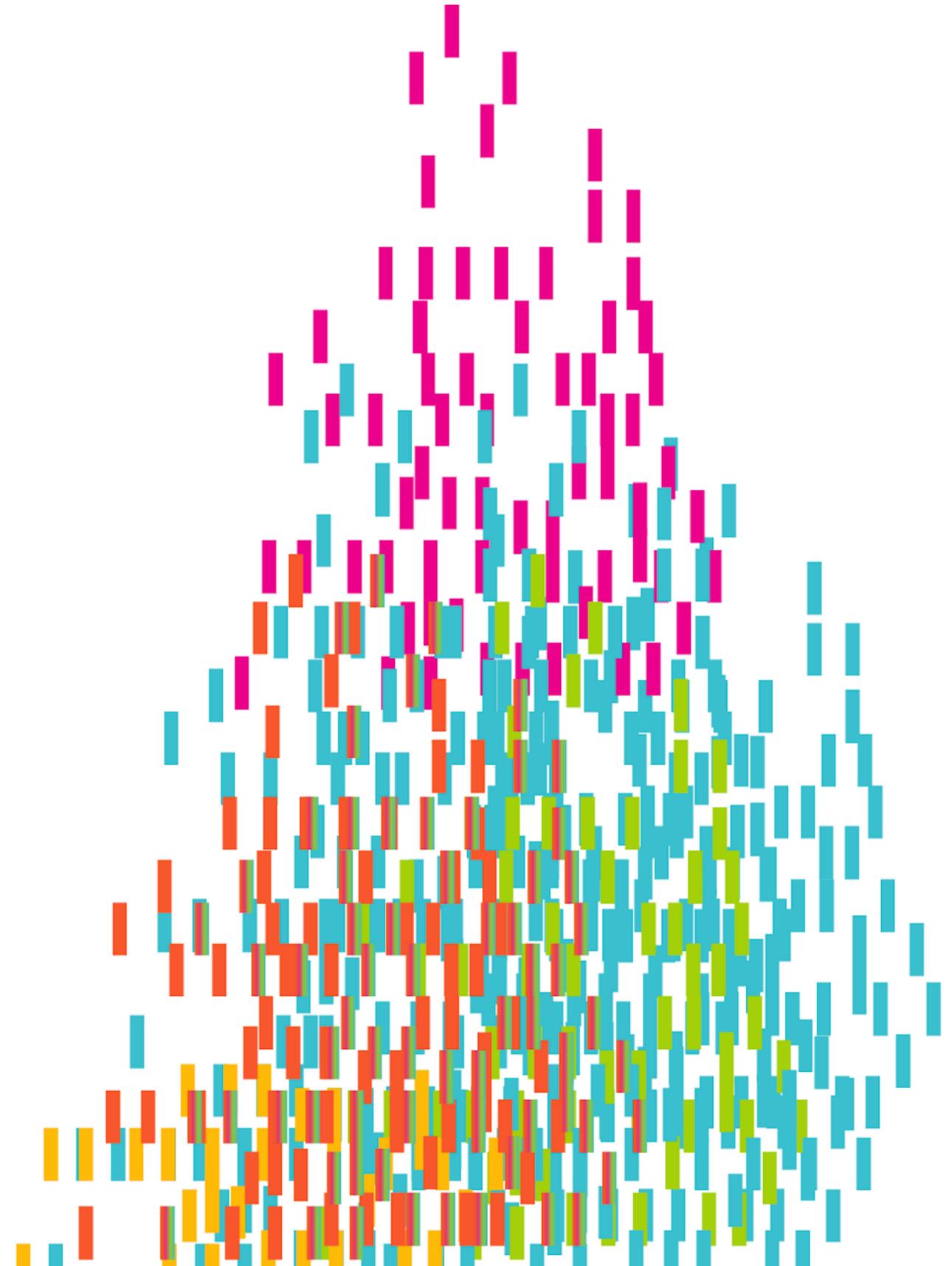




# Making things smarter

Edge AI and Vision Alliance  
*Webinar*

Zach Shelby & Daniel Situnayake  
February 25th, 2021

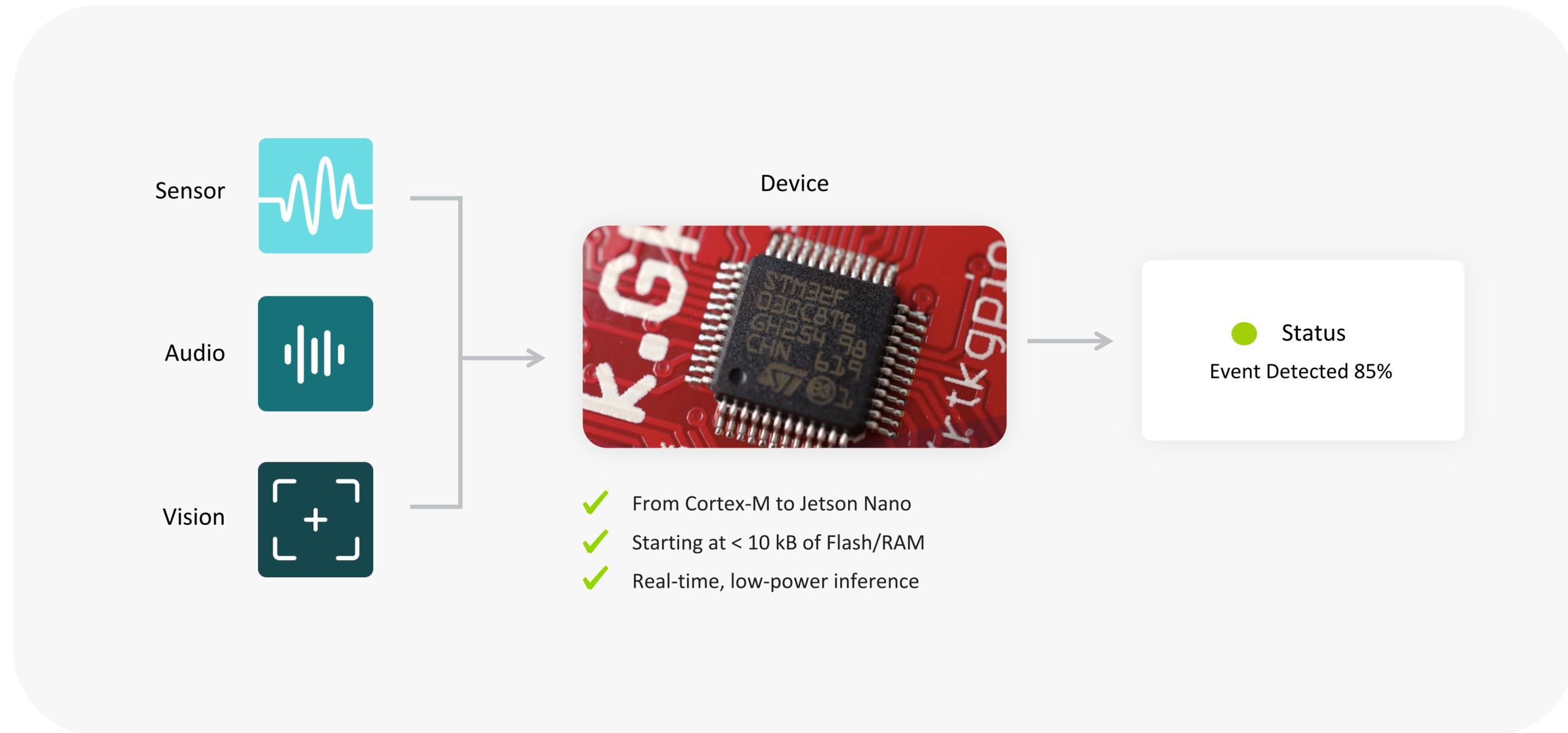




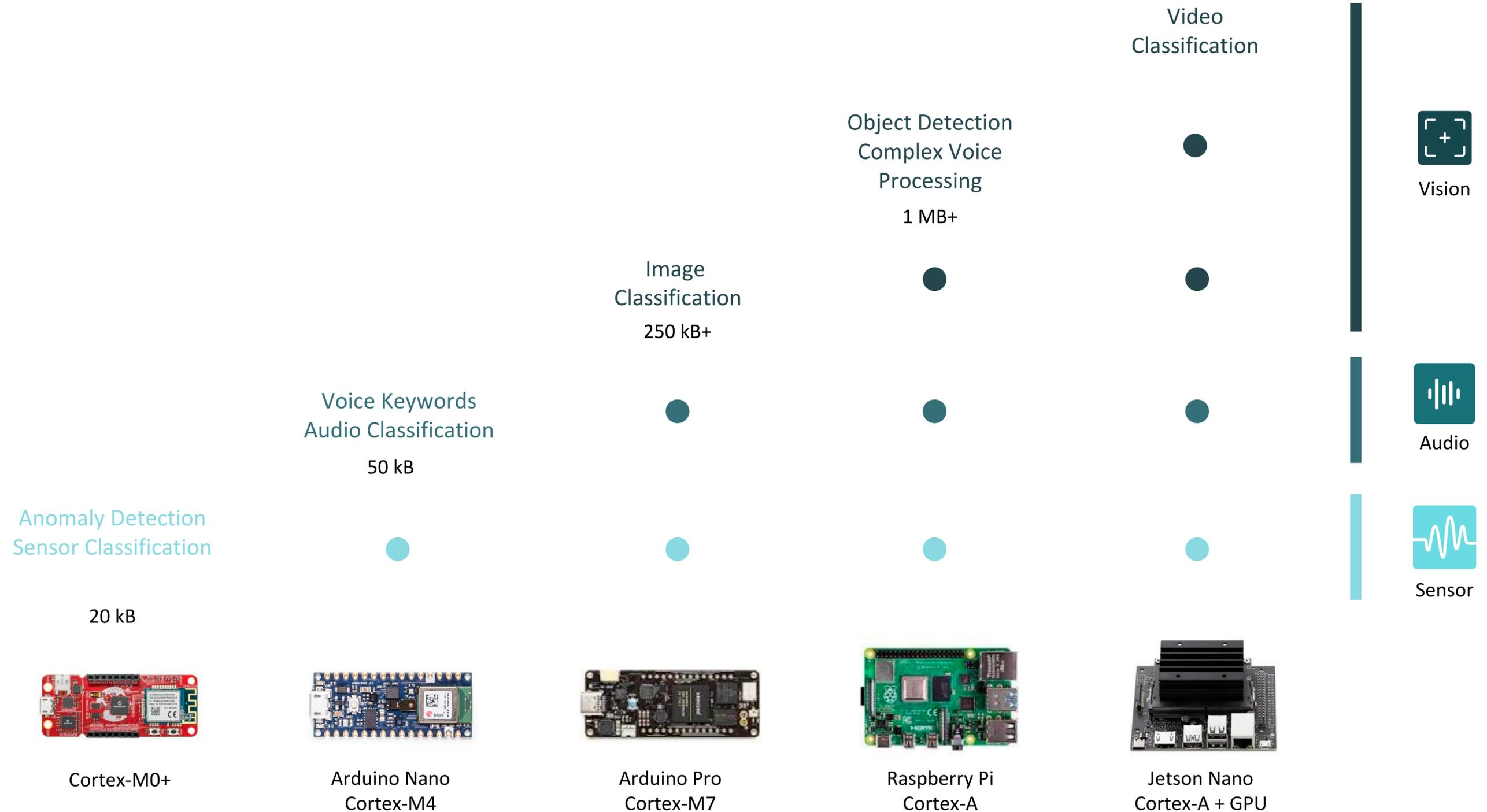
Machine learning?



# Embedded ML makes devices smarter



# Embedded ML makes devices smarter



# Sensor engineering today

## Rule-based Code



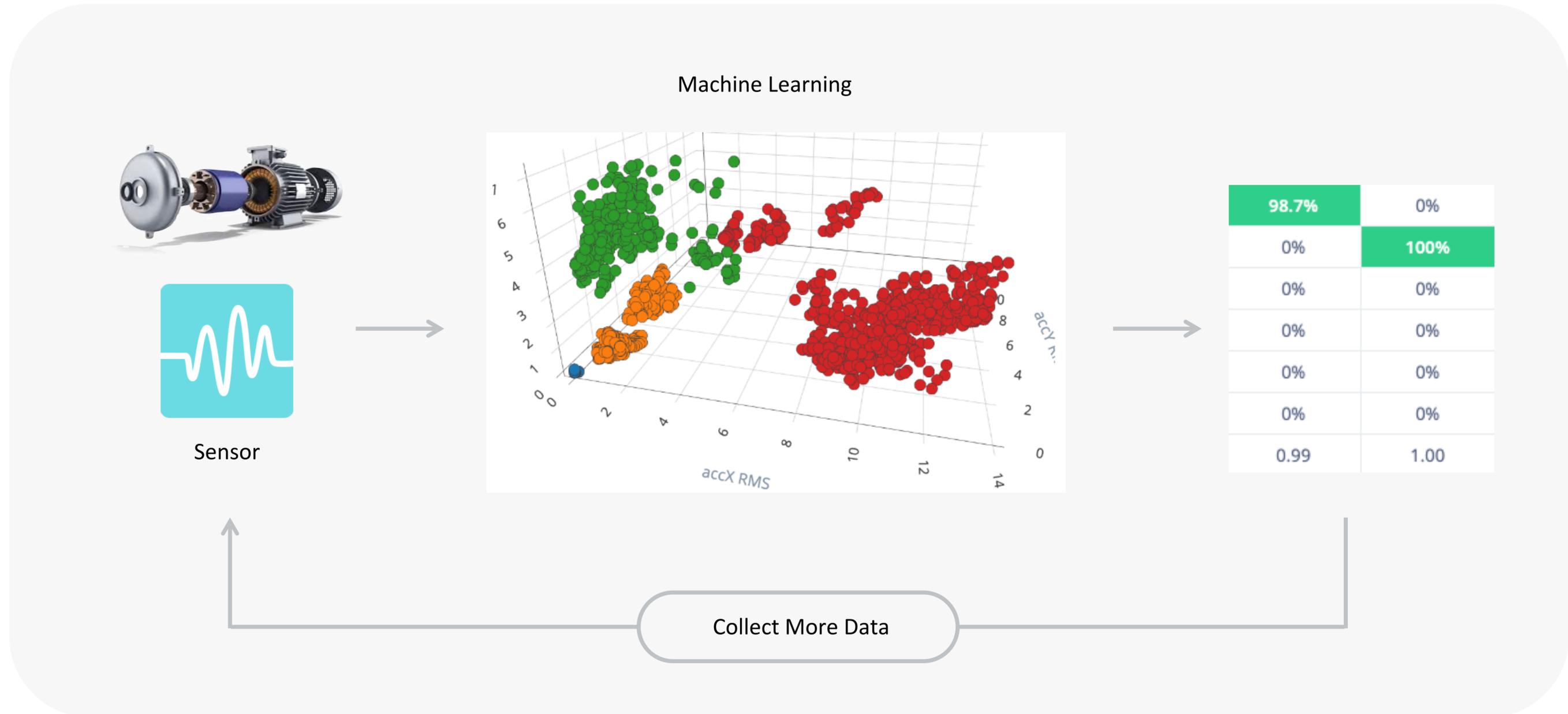
```
Blink 5
This example code is in the public domain.
http://www.arduino.cc/en/Tutorial/Blink
*/
// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}
// the loop function runs over and over again forever
void loop() {$
  digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
  delay(1000); // wait for a second
  digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW
  delay(1000); // wait for a second
}
```

Trial and Error

Write More Code



# Data-driven engineering is here!



## Predictive Maintenance

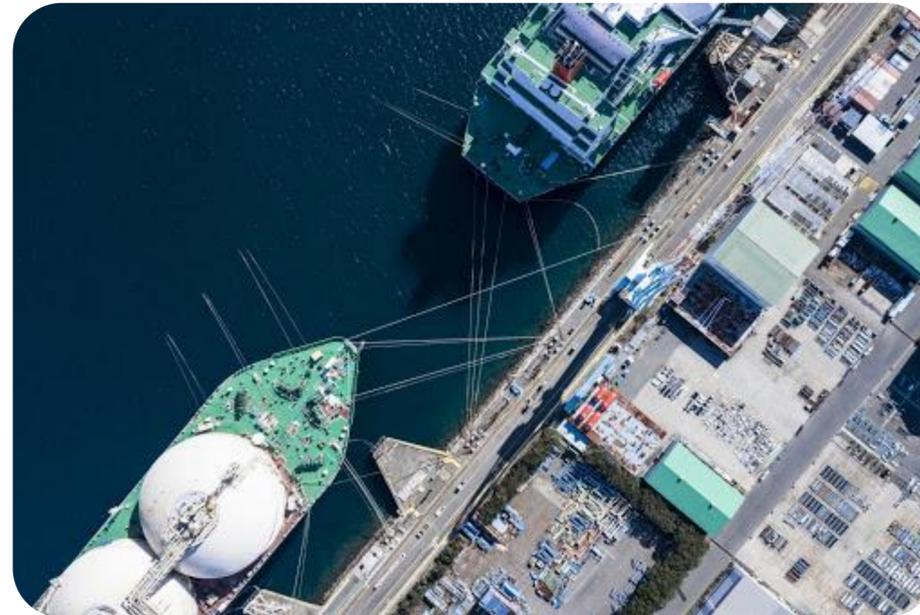
Motion, current, audio and camera



- Industrial
- White goods
- Infrastructure
- Automotive

## Asset Tracking & Monitoring

Motion, temp, humidity, position, audio and camera



- Logistics
- Infrastructure
- Buildings

## Human & Animal Sensing

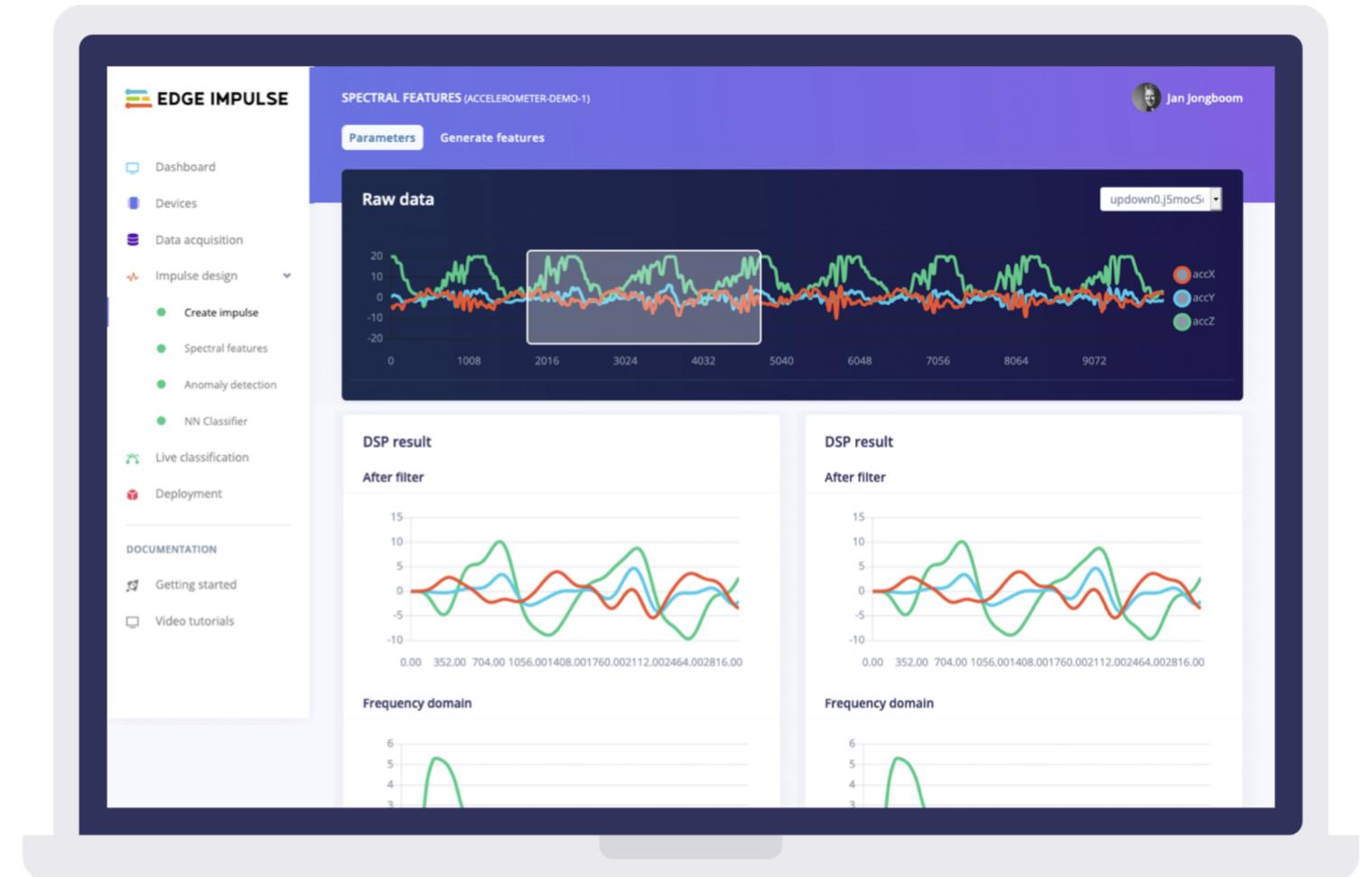
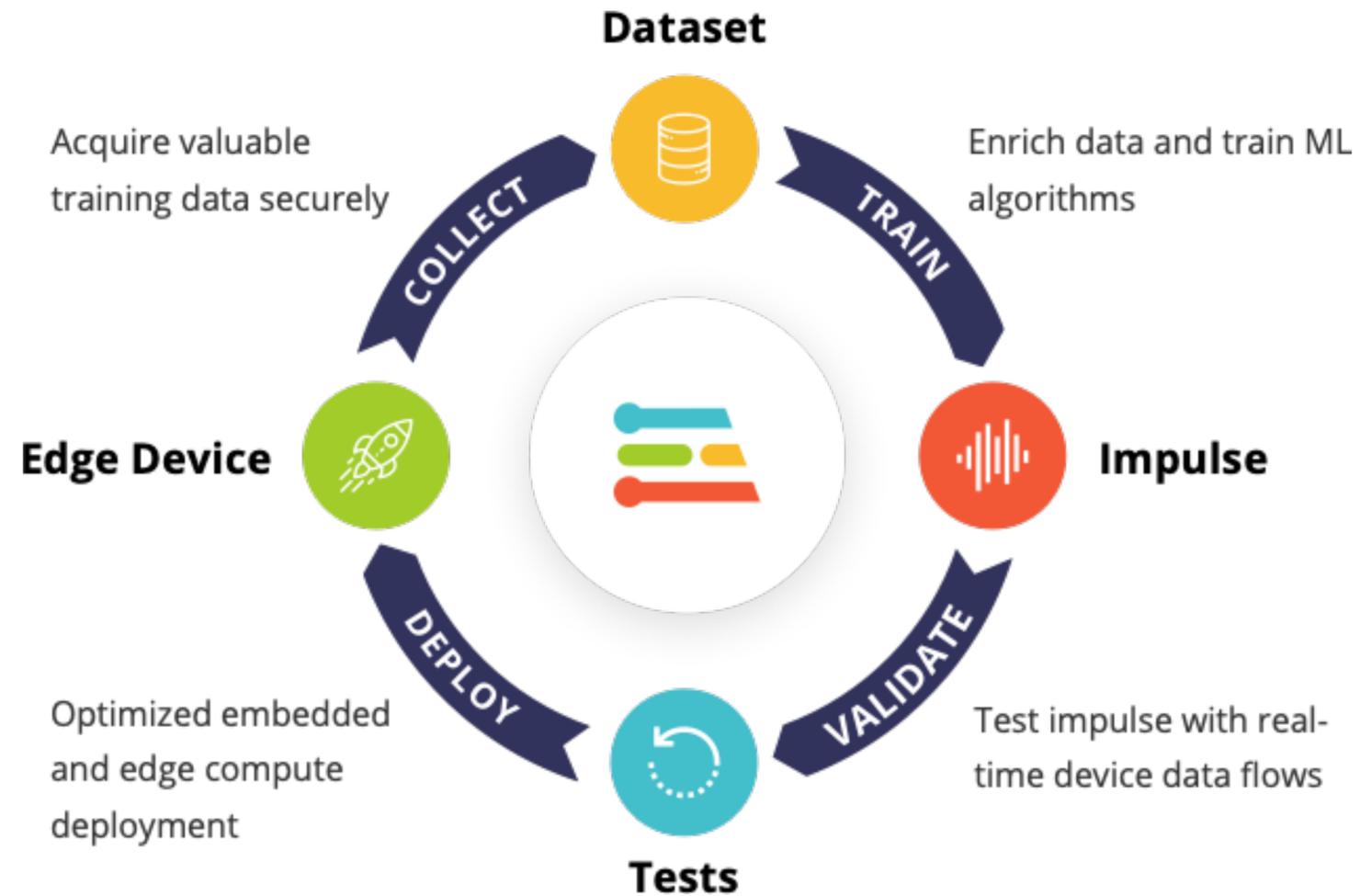
Motion, radar, audio, PPG, ECG



- Health
- Consumer
- Industrial



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