TinyML Sensor Ecosystem

Traditional ML Sensors

Embedded Sensor **Ecosystem**

Embedded Sensor **Ecosystem**

Inertial Measurement Unit (**IMU**)
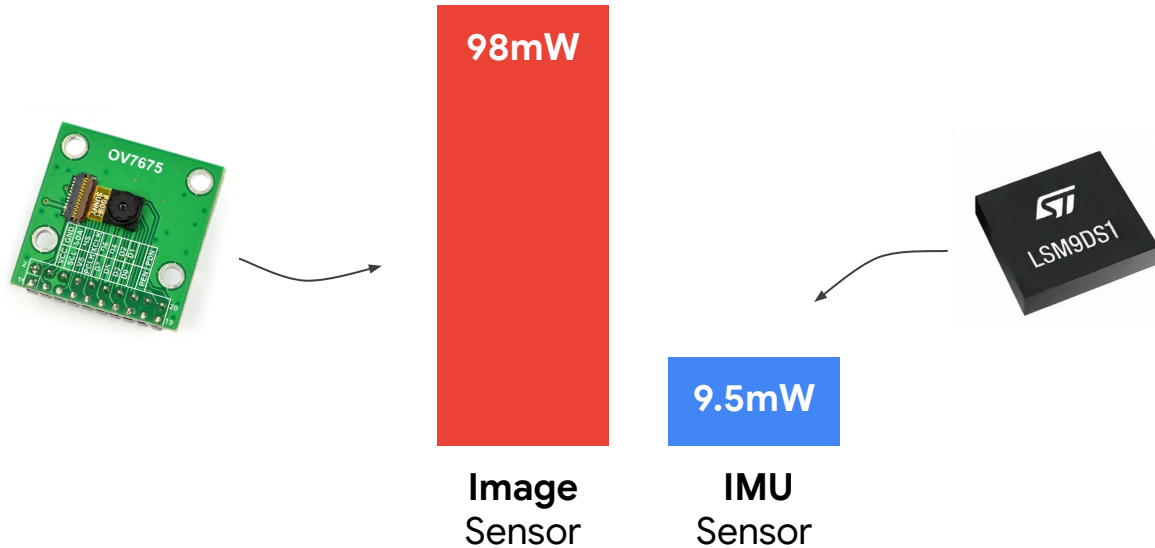

Accelerometer

Gyroscope

Magnetometer

Low Power Sensors

OV7675

98mW

9.5mW

Image
Sensor

IMU
Sensor

LSM9DS1

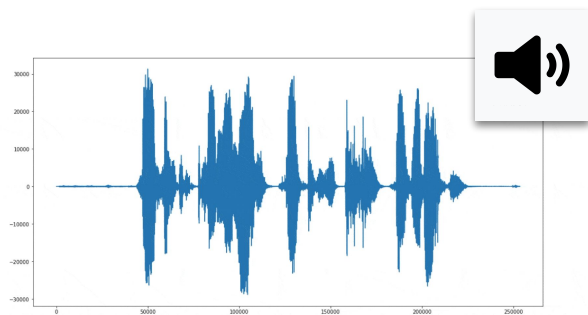# Size, Weight, Price
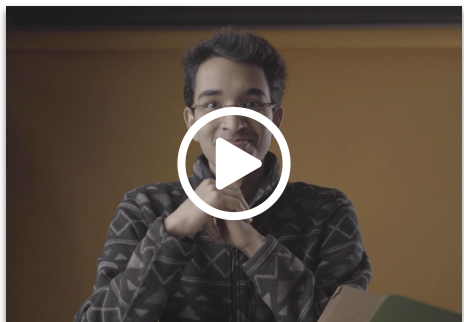

illustrative

Applications of an IMU

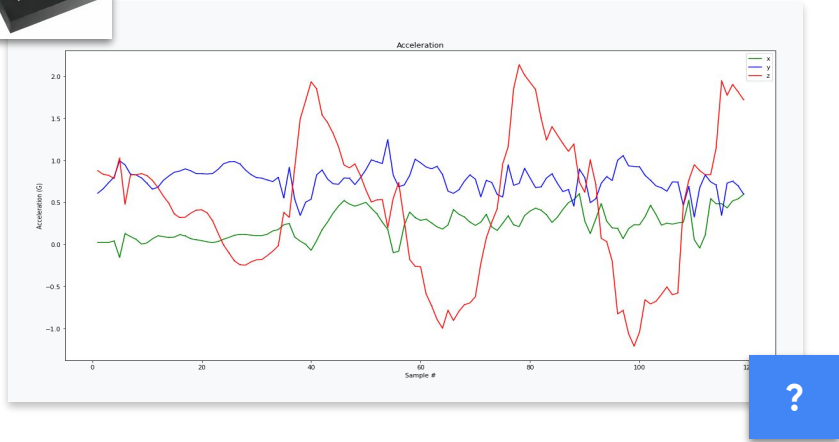# Challenges

1. Interpretability

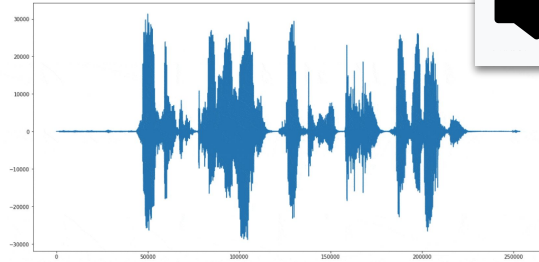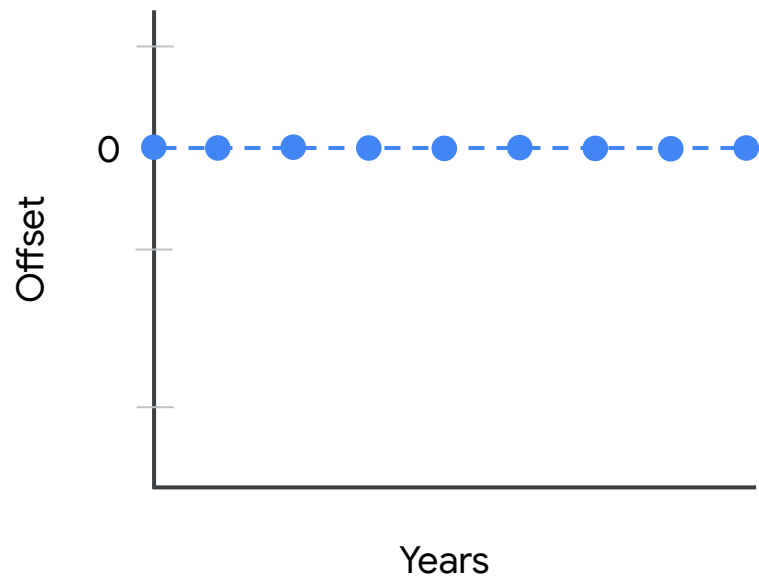2. Sensor Drift

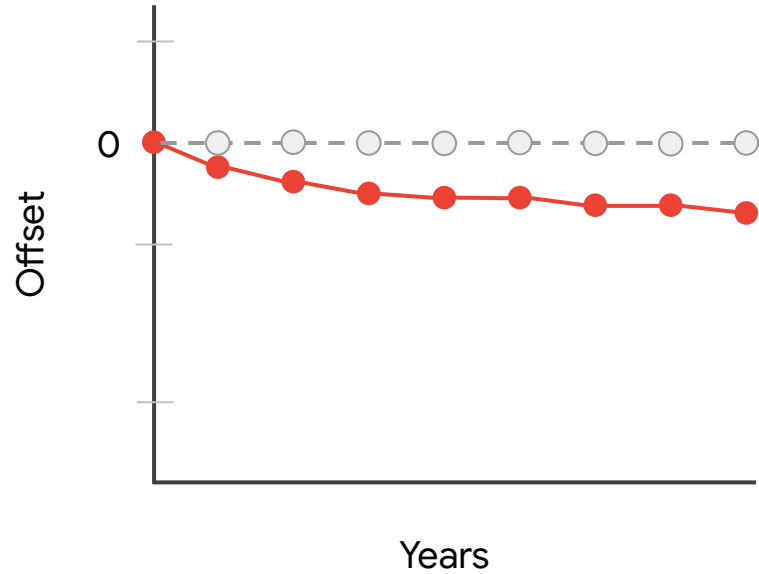3. Deployment Sensitivity

Human interpretability

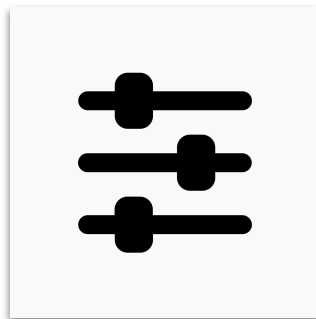# **Human** interpretability

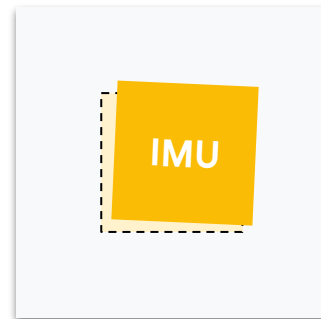# **Ideal** Sensor

Sensor **Drift**

Deployment Sensitivity

There are **minor differences** in deployment for sensors that can cause a **bias** in the data.

Parameter Tuning

IMU

Misalignment