DATA

Data name	Sensor type	Signal data length	Number of signals	Data repartition score ⓘ
vertical			201	
triangle			198	
horizontal	multiGeneric	768 (128 * 6 axis)	203	Excellent ★★★★★
circle			200	
standby			229	

PERFORMANCE

Performance	Value
Score ⓘ	95.54 %
Balanced Accuracy ⓘ	96.73 %
RAM ⓘ	1.9 KB
Flash ⓘ	176.4 KB

Classname	Recall ⓘ
vertical	98.50 %
triangle	97.69 %
horizontal	98.00 %
circle	91.25 %

CROSS VALIDATION

Balanced accuracy of 10 cross-validation tests ⓘ				
Median	Average	Min	Max	STDEV
96.53 %	96.73 %	95.96 %	97.56 %	0.56

Performance	Value
Accuracy ⓘ	96.77 %
F1-Score ⓘ	96.75 %
ROC AUC Score ⓘ	99.10 %
Precision ⓘ	96.97 %
MCC ⓘ	96.00 %

Classname	Recall ⓘ
standby	98.22 %

ALGORITHM FLOWCHART

Input signal buffer →

Signal Processing

Features Extraction & Selection ⓘ → Cut-Off End ⓘ

ML Model

RF ⓘ

→ Inference result: probability of each class