






Deploy your impulse

You can deploy your impulse to any device. This makes the model run without an internet connection, minimizes latency, and runs with minimal power consumption. [Read more](#).










Create library

Turn your impulse into optimized source code that you can run on any device.

 C++ library	 Arduino library	 Cube.MX CMSIS-PACK
 WebAssembly	 TensorRT library	

Build firmware

Or get a ready-to-go binary for your development board that includes your impulse.

 ST IoT Discovery Kit	 Arduino Nano 33 BLE Sense	 Eta Compute ECM3532 AI Sensor
 Eta Compute ECM3532 AI Vision	 SiLabs Thunderboard Sense 2	 Himax WE-I Plus
 Nordic nRF52840 DK + IKS02A1	 Nordic nRF5340 DK + IKS02A1	 Linux boards

Select optimizations *(optional)*

Model optimizations can increase on-device performance but may reduce accuracy. Click below to analyze optimizations and see the recommended choices for your target. Or, just click Build to use the currently selected options.



Enable EON™ Compiler

Same accuracy, up to 50% less memory. Open source.



Available optimizations for NN Classifier



Quantized (int8) ★

Currently selected

This optimization is recommended for best performance.

RAM USAGE

5.3K

ROM USAGE

36.2K

LATENCY

4 ms

ACCURACY

75.08%

CONFUSION MATRIX

96.7	1.3	0	0	2
3.7	56	7	5.3	28
1.7	5	71.7	1	20.7
2.7	2	1	76	18.3

Unoptimized (float32)

Click to select

RAM USAGE

8.8K

ROM USAGE

39.7K

LATENCY

18 ms

ACCURACY

75.42%

CONFUSION MATRIX

97.3	1	0	0	1.7
3.7	54.7	8.3	4.7	28.7
1.7	3.3	74.3	0.7	20
2.3	2.3	1	75.3	19

Estimate for Cortex-M4F 80MHz (ST IoT Discovery Kit)

Build

Build output

Creating job... OK (ID: 744528)

Generating features for MFCC...
Scheduling job in cluster...
Job started
Creating windows from 1209 files...
[2/3] Pre-caching files...
[3/3] Pre-caching files...
Pre-caching files OK

[1/1209] Creating windows from files...
WARN: failed to process 27245/testing/testing.239kutrf.ingestion-85c48484b8-pflcb.json: Cannot process file, impulse window size setting requires 16000 data frames, but this file only contains 160 data frames

[79/1209] Creating windows from files...
[365/1209] Creating windows from files...
[658/1209] Creating windows from files...
[939/1209] Creating windows from files...
[1198/1209] Creating windows from files...
[1209/1209] Creating windows from files...
Created 1262 windows: _noise: 300, _unknown: 300, go: 300, stop: 300, testing: 62