

EDGE IMPULSE

Dashboard

Devices

Data sources

Data acquisition

Impulse design

Create impulse

Spectral features

NN Classifier

Anomaly detection

EON Tuner

Retrain model

Live classification

Model testing

Versioning

Training data | Test data | Data explorer | Upload data | Export data

Did you know? You can capture data from any device or development board, or upload your existing datasets - [Show options](#)

DATA COLLECTED

1m 28s

TRAIN / TEST SPLIT

82% / 18%

Record new data

Connect using WebUSB

No devices connected to the remote management API.

Collected data

SAMPLE NAME	LABEL	ADDED	LENGTH	
snake.3i7d2gg9	snake	Today, 17:52:43	10s	
wave.3i7cuk9p	wave	Today, 17:50:35	10s	
updown.3i7csvoe	updown	Today, 17:49:41	10s	
snake.3i7crkqr	snake	Today, 17:48:58	10s	
snake.3i7cr0bv	snake	Today, 17:48:37	10s	
wave.3i7cpjji	wave	Today, 17:47:51	10s	
updown.3i7cot70	updown	Today, 17:47:28	10s	
wave.3i7cklit	wave	Today, 17:45:09	10s	

RAW DATA

Click on a sample to load...

Scanned with CamScanner

#1 Click to set a description for this version

Target: Cortex-M4F 80MHz

Neural Network settings

Training settings

Number of training cycles

100

Learning rate

0.0005

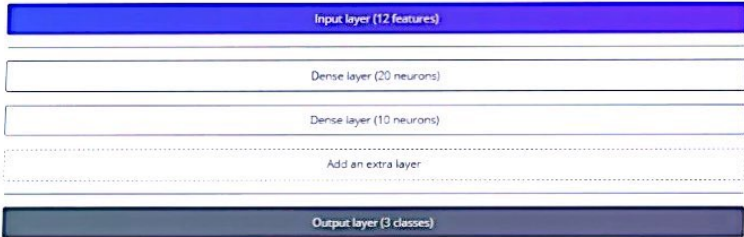
Validation set size

20

96

Auto-balance dataset

Neural network architecture



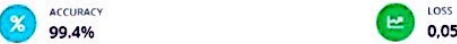
Start training

Training output

Model

Model version: Quantized (int8)

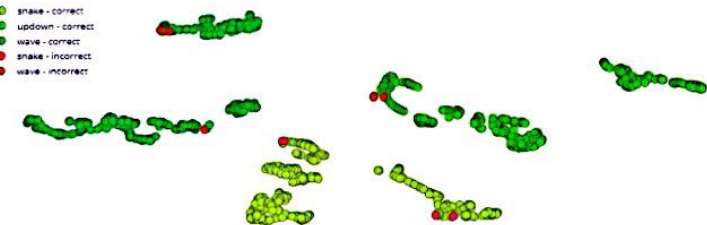
Last training performance (validation set)



Confusion matrix (validation set)



Data explorer (full training set)



On-device performance



#1 Click to set a description for this version



Anomaly explorer (882 samples)

X Axis: accX RMS

Y Axis: accY RMS

Test data: -- No test data

trained

Training output

Click 'Start training' to begin

Upload existing data

You can upload existing data to your project in the Data Acquisition Format (CBOR, JSON, CSV), or as WAV, JPG, PNG, AVI or MP4 files.

Select files

Dosyaları Seç Dosya seçilmedi

Upload into category

☒ Automatically split between training and testing ⓘ

☐ Training

☐ Testing

Label

☒ Infer from filename ⓘ

☐ Leave data unlabeled ⓘ

Enter label:

Enter a label

Begin upload

Upload output

```
[666/674] Failed to upload noise.pink_noise.wav.42000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[667/674] Failed to upload noise.running_tap.wav.27000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[668/674] Failed to upload noise.running_tap.wav.29000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[669/674] Failed to upload noise.running_tap.wav.50000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[670/674] Failed to upload noise.running_tap.wav.60000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[671/674] Failed to upload noise.white_noise.wav.14000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[672/674] Failed to upload noise.running_tap.wav.33000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[673/674] Failed to upload noise.white_noise.wav.22000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}  
[674/674] Failed to upload noise.white_noise.wav.47000.wav: {"response":  
{"readyState":0,"status":0,"statusText":"error"},"errorThrown":""}
```

Done. Files uploaded successful: 0. Files that failed to upload: 674.

Job completed

An impulse takes raw data, uses signal processing to extract features, and then uses a learning block to classify new data.

Time series data

Input axes (3)
accX, accY, accZ

Window size
2000 ms

Window increase
80 ms

Frequency (Hz)
62.5

Zero-pad data

Spectral Analysis

Name
Spectral features

Input axes (3)
☒ accX
☒ accY
☒ accZ

Add a processing block

Classification (Keras)

Name
NN Classifier

Input features
☒ Spectral features

Output features
3 (snake, updown, wave)

Anomaly Detection (K-means)

Name
Anomaly detection

Input features
☒ Spectral features

Output features

Output features

3 (snake, updown, wave)

Save Impulse

Test data

Classify all

Set the 'expected outcome' for each sample to the desired outcome to automatically score the impulse.

SAMPLE NAME	EXPECTED OUTCO...	LENGTH	ACCURACY	RESULT
testing.3i7e0...	testing	10s		52 wave, 30 uncertain,...
testing.3i7dv...	testing	10s		77 wave, 13 snake, 7 a...
testing.301f...	testing	5s		38 anomaly
testing.301f...	testing	5s		38 updown
wave.301elvat	wave	10s	100%	97 wave
updown.301...	updown	10s	100%	98 updown
sabit.301e96...	sabit	10s		89 anomaly, 7 snake
sabit.301e5ia0	sabit	10s		97 anomaly
sabit.301e4q...	sabit	10s		97 anomaly

Model testing output

Model testing results

%	ACCURACY				
	100.00%				
	SNAKE	UPDOWN	WAVE	ANOMALY	UNCERTAIN
SNAKE	-	-	-	-	-
UPDOWN	0%	100%	0%	0%	0%
WAVE	0%	0%	100%	0%	0%
ANOMALY	-	-	-	-	-
F1 SCORE	0.00	1.00	1.00	0.00	

Feature explorer



[Training data](#) | [Test data](#) | [Data explorer](#) | [Upload data](#) | [Export data](#)

👍 **Did you know?** You can capture data from any device or development board, or upload your existing datasets - [Show options](#)

DATA COLLECTED
17m 26s



TRAIN / TEST SPLIT
80% / 20% ▲



Record new data

🔌 Connect using WebUSB

📱 No devices connected to the remote management API.

Collected data

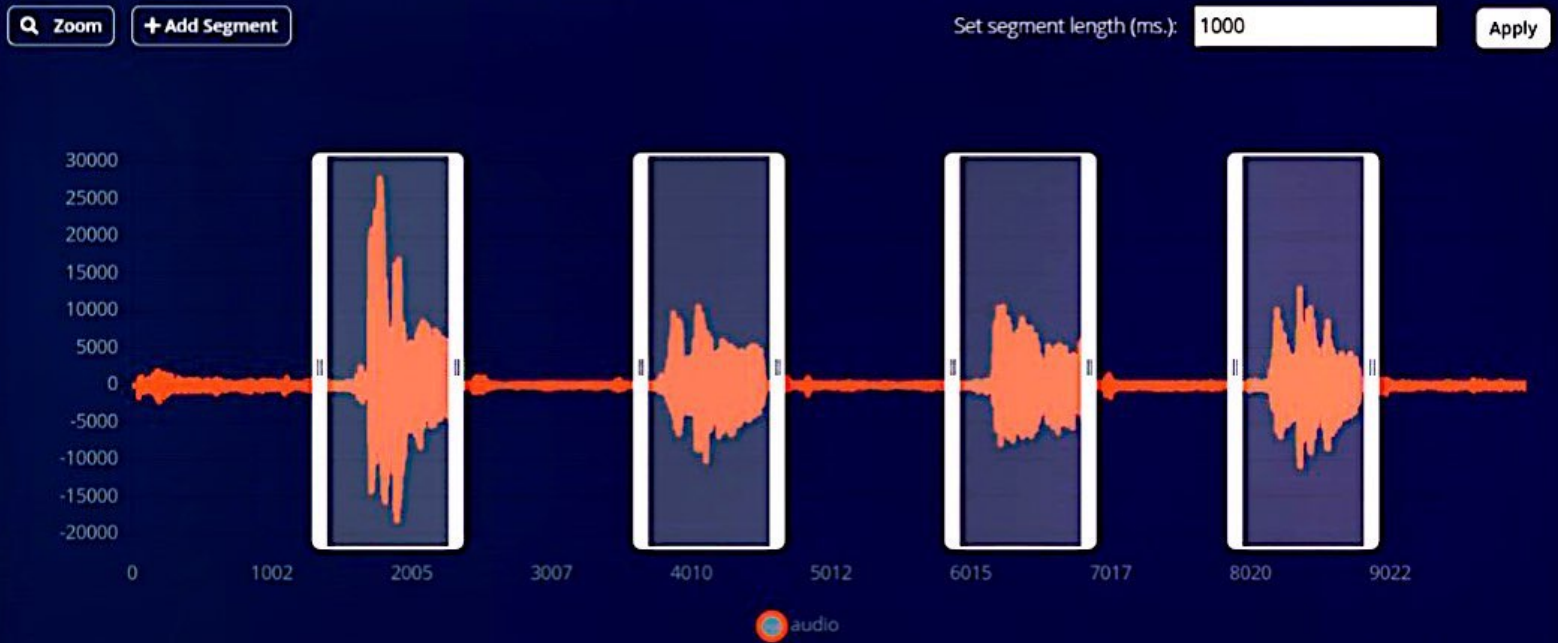
🔍 📄 📁 🗑️

SAMPLE NAME	LABEL	ADDED	LENGTH	
unknown.e48a80ed_noh...	unknown	Today, 21:12:07	1s	⋮
unknown.e10e2cbb_noh...	unknown	Today, 21:12:06	1s	⋮
unknown.e9bc5cc2_noh...	unknown	Today, 21:12:05	1s	⋮
unknown.e8b6f6fe_noh...	unknown	Today, 21:12:05	1s	⋮
unknown.e9bc5cc2_noh...	unknown	Today, 21:12:05	1s	⋮
unknown.e9b61425_noh...	unknown	Today, 21:12:04	1s	⋮
unknown.e9b61425_noh...	unknown	Today, 21:12:04	1s	⋮

RAW DATA

Click on a sample to load...

Split sample 'helloworld.3i7kvrjo'



Cancel

Shift samples ⓘ

Split

DATA COLLECTED
10s

TRAIN / TEST SPLIT
100% / 0%



Collected data



SAMPLE NAME	LABEL	ADDED	LENGTH	
helloworld.3i7kvrjo	helloworld	Today, 20:11:04	10s	



Record new data

Connect using WebUSB

Device

phone_lapguib7

Label

helloworld

Sample length (ms.)

10000

Sensor

Microphone

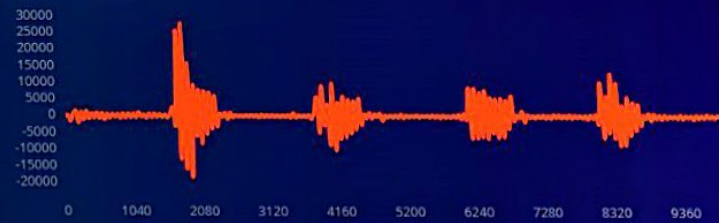
Frequency

16000Hz

Start sampling

RAW DATA

helloworld.3i7kvrjo



audio

0.04 / 0.10

