


#1 1DConv(16-32) batch 512 

Neural Network settings

Training settings

Number of training cycles ?

200

Learning rate ?

0.005

Minimum confidence rating ?

0.60

Audio training options

Data augmentation ?

Neural network architecture

Architecture presets ? 1D Convolutional (Default) 2D Convolutional

Input layer (624 features)

Reshape layer (13 columns)

1D conv / pool layer (32 neurons, 3 kernel size, 3 layers)

Dropout (rate 0.25)

1D conv / pool layer (32 neurons, 3 kernel size, 3 layers)

Dropout (rate 0.25)

Flatten layer

Add an extra layer

Output layer (15 features)

Start training

Training output

Model

Model version: Quantized (int8)

Last training performance (validation set)

ACCURACY
75.0%

LOSS
1.19

Confusion matrix (validation set)

	_NOI	_UN	BAC	DOWN	FOR	GO	LEFT	NO	OFF	ON	RIGHT	STOP	UP	VISU	YES
_NOISE	97.1%	1.2%	0.4%	0%	0%	0%	0%	0%	0%	0%	0%	0.8%	0.4%	0%	0%
_UNKNOWN	7.9%	53.3%	2.6%	3.1%	6.6%	5.2%	1.3%	2.2%	1.7%	5.2%	3.5%	0.4%	1.3%	3.9%	1.7%
BACKWARD	4.1%	7.0%	81.8%	0%	0.4%	0.4%	1.2%	0.4%	0.4%	0%	0.4%	0%	2.5%	0.8%	0.4%
DOWN	1.6%	6.1%	0.4%	75.3%	0%	4.9%	1.2%	7.7%	0%	0.8%	0%	0.8%	0.8%	0%	0.4%
FORWARD	1.9%	11.5%	0.4%	0%	78.9%	1.1%	0%	0%	0.4%	5.2%	0%	0%	0.7%	0%	0%
GO	3.3%	7.8%	0.4%	6.2%	4.1%	60.9%	0.8%	11.5%	1.2%	0.8%	0%	0.8%	1.2%	0%	0.8%
LEFT	0.8%	6.7%	2.1%	0%	0%	0%	66.4%	1.3%	2.5%	0%	1.3%	0.4%	0.8%	0.4%	17.2%
NO	3.0%	6.9%	0%	6.0%	0.4%	10.8%	0%	71.1%	0.4%	0%	0%	0%	0%	0.4%	0.9%
OFF	1.9%	7.0%	0%	0%	0.9%	2.8%	0%	0%	76.6%	1.9%	0%	0%	8.9%	0%	0%
ON	3.0%	10.4%	0%	0%	2.6%	0.4%	0%	0%	7.0%	75.7%	0%	0%	0.9%	0%	0%
RIGHT	2.1%	12.0%	0.4%	0%	0.4%	0.4%	4.1%	0%	0%	0%	80.1%	0%	0.4%	0%	0%
STOP	3.6%	6.3%	0%	1.8%	0%	2.3%	0%	0.5%	3.2%	0%	0%	76.5%	5.4%	0.5%	0%
UP	2.8%	5.9%	0%	0.4%	0%	2.8%	0.8%	0%	18.1%	1.2%	0%	0.8%	67.3%	0%	0%
VISUAL	2.1%	20.1%	0%	0.4%	0%	0.8%	0%	0.4%	0%	0%	0%	0.4%	0%	75.7%	0%
YES	3.5%	5.9%	0%	0.8%	0%	0%	0.8%	2.0%	0%	0%	0%	0%	0.8%	0.4%	85.9%
F1 SCORE	0.82	0.39	0.87	0.78	0.82	0.64	0.75	0.72	0.71	0.79	0.87	0.84	0.71	0.83	0.83

Feature explorer (full training set)

- _noise - correct
 - _unknown - correct
 - backward - correct
 - down - correct
 - forward - correct
 - go - correct
 - left - correct
 - no - correct
 - off - correct
 - on - correct
 - right - correct
 - stop - correct
 - up - correct
 - visual - correct
 - yes - correct
 - noise - incorrect

On-device performance

INFERENCE TIME
30 ms.

PEAK RAM USAGE
13.0K

ROM USAGE
56.4K

