#1 Click to set a description for this version

Neural Network settings

Training settings

Minimum confidence rating

0.60

Neural network architecture

```
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, InputLayer, Dropout, Conv1D,
    Conv2D, Flatten, Reshape, MaxPooling1D, MaxPooling2D,
    BatchNormalization
from tensorflow.keras.optimizers import Adam
sys.path.append('./resources/libraries')
import ei_tensorflow.training

# model architecture
model = Sequential()
model.add(Reshape((int(input_length / 13), 13), input_shape=(input_length
    , )))
model.add(Conv1D(8, kernel_size=3, activation='relu', padding='same'))
model.add(MaxPooling1D(pool_size=2, strides=2, padding='same'))
model.add(Dropout(0.25))
model.add(Conv1D(16, kernel_size=3, activation='relu', padding='same'))
model.add(MaxPooling1D(pool_size=2, strides=2, padding='same'))
model.add(Dropout(0.25))
model.add(Flatten())
model.add(Dense(classes, activation='softmax', name='y_pred'))

# this controls the learning rate
opt = Adam(lr=0.005, beta_1=0.9, beta_2=0.999)
# this controls the batch size, or you can manipulate the tf.data.Dataset
    objects yourself
BATCH_SIZE = 32
train_dataset, validation_dataset = ei_tensorflow.training.set_batch_size
    (BATCH_SIZE, train_dataset, validation_dataset)
callbacks.append(BatchLoggerCallback(BATCH_SIZE, train_sample_count))

# train the neural network
model.compile(loss='categorical_crossentropy', optimizer=opt, metrics
```

Start training

Training output

Model

Model version: Unoptimized (float32)

Last training performance (validation set)

ACCURACY
88.1%

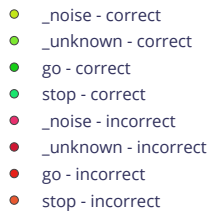
LOSS
0.35

Confusion matrix (validation set)

	_NOISE	_UNKNOWN	GO	STOP
_NOISE	**95.1%**	1.6%	0%	3.3%
_UNKNOWN	3.1%	**75.3%**	14.1%	7.5%

	_NOISE	_UNKNOWN	GO	STOP
GO	1.7%	8.1%	**88.5%**	1.7%
STOP	0.4%	5.2%	2.0%	**92.5%**
F1 SCORE	0.95	0.79	0.87	0.91

Feature explorer (full training set)



On-device performance

INFERENCING TIME
18 ms.

PEAK RAM USAGE
8.8K

ROM USAGE
39.7K