Automatic generated report CNET0045.

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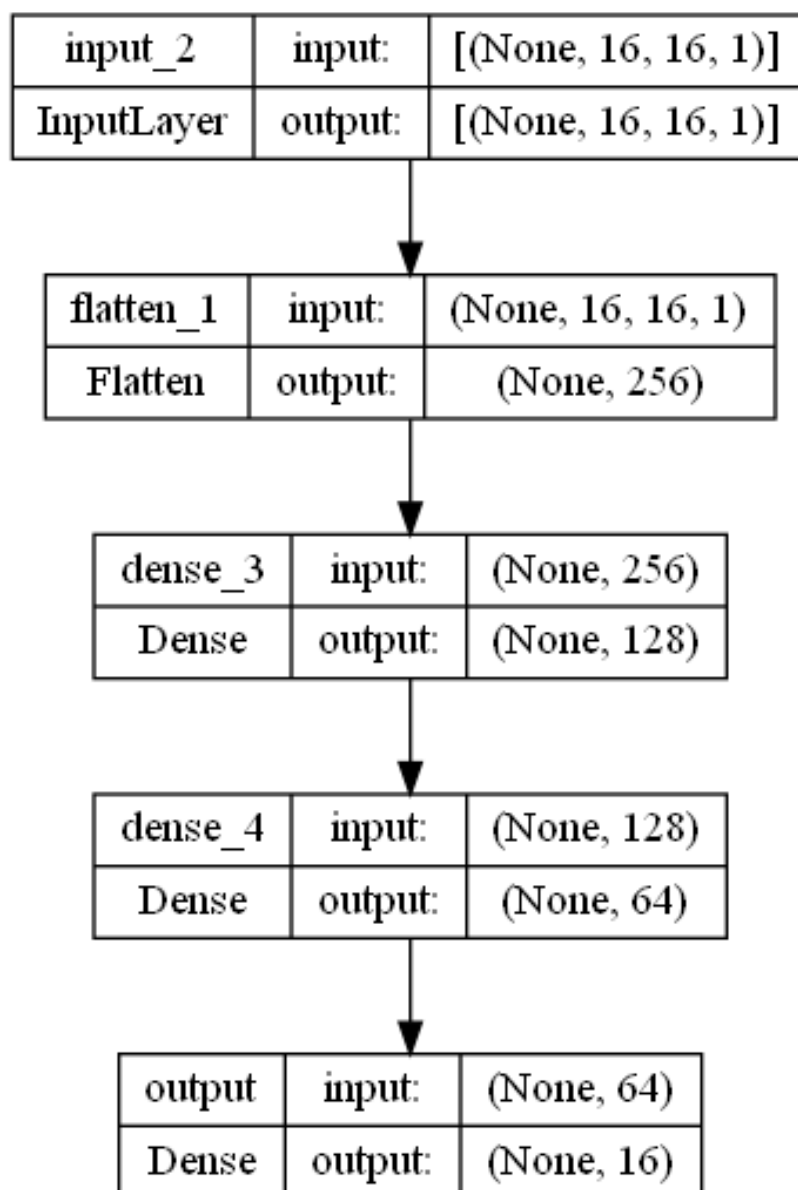
input_2	input:	[(None, 16, 16, 1)]
InputLayer	output:	[(None, 16, 16, 1)]

flatten_1	input:	(None, 16, 16, 1)
Flatten	output:	(None, 256)

dense_3	input:	(None, 256)
Dense	output:	(None, 128)

dense_4	input:	(None, 128)
Dense	output:	(None, 64)

output	input:	(None, 64)
Dense	output:	(None, 16)

Fig. 1: Model visualization

1 Model

The model has been compiled successfully with the following parameters:

Layer	Shape	Attributes
Flatten	(None,)	
Dense	(128,)	
Dense	(64,)	

Tab. 1: Model architecture and attributes.

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───────────────────────────────── │Model summary │ ──────────────────────────────
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Model: "model_0"
-------------------------------------------------------------------
 Layer type              Output Shape              Param #
===================================================================
 input_1 InputLayer      [None, 16, 16, 1]         0

 flatten Flatten         None, 256                 0

 dropout Dropout         None, 256                 0

 dense Dense             None, 128                 32896

 dropout_1 Dropout       None, 128                 0

 dense_1 Dense           None, 64                  8256

 dense_2 Dense           None, 32                  2080

 output Dense            None, 16                  528

===================================================================
Total params: 43,760
Trainable params: 43,760
Non-trainable params: 0
-------------------------------------------------------------------
Model: "model_0"
-------------------------------------------------------------------
 Layer type              Output Shape              Param #
===================================================================
 input_2 InputLayer      [None, 16, 16, 1]         0

 flatten_1 Flatten       None, 256                 0

 dense_3 Dense           None, 128                 32896

 dense_4 Dense           None, 64                  8256

 output Dense            None, 16                  1040

===================================================================
```

```
Total params: 42,192
Trainable params: 42,192
Non-trainable params: 0
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1.1   Compiler

- *Problem specifications.* The input shape mesh is *(16, 16, 1)*, while the output shape is (*16*).

- *Compiling options.* The model makes use of the *mean squared error* loss function and the *adam* optimizer. The metrics taken into account are accuracy and loss.

- *Devices.* The model was trained with 1GPUs.

2   Database

The database **test wk** was generated with *BaseNetDatabase (BND)* . The training - validation - test distribution is *(60, 20, 20)* and the total size of the database is *256*.

3   Performance

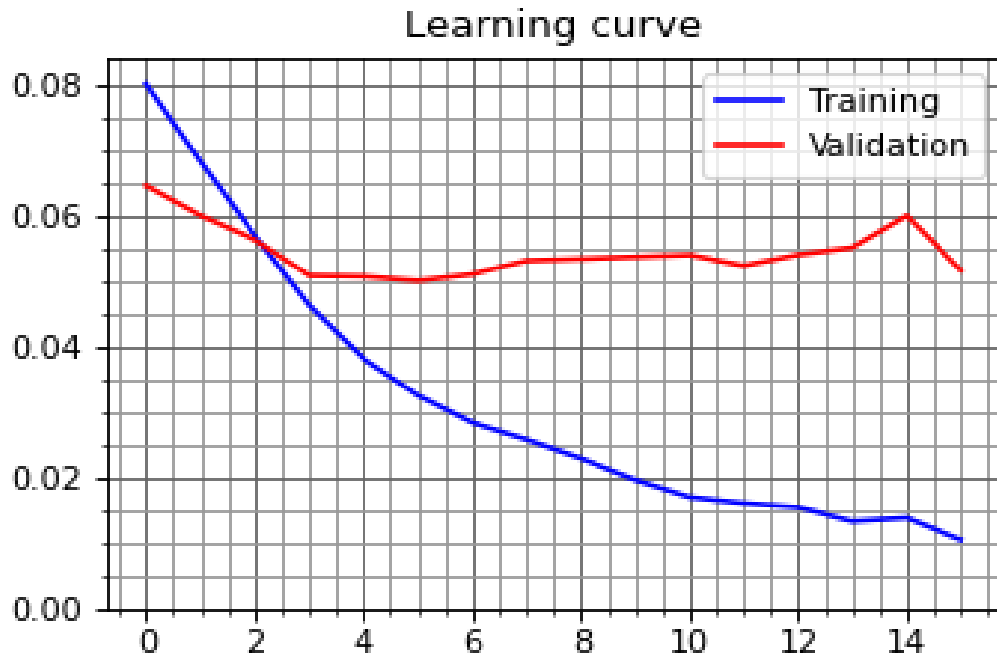The obtained learning curve is shown below. With **maxloss**: 0.0804, and **minloss**: 0.0103.

Fig. 2: Learning curve with the introduced database.