SpectrogramCNN Model

Training Report

Gauss Chang [†] and supervisor's name [‡]

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[†] Department of Physics
NATIONAL TAIWAN UNIVERSITY

[‡] Department of Something
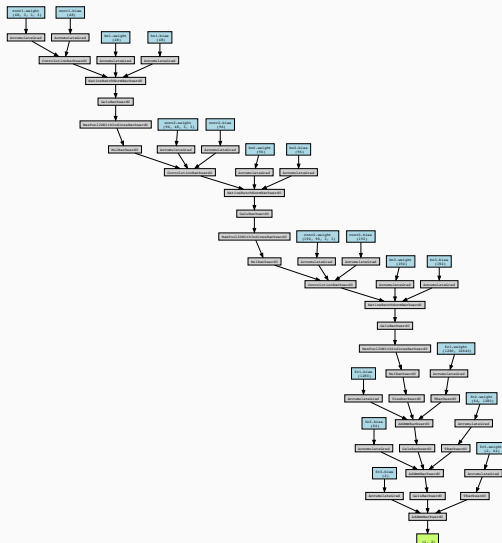SUPERVISOR'S INSTITUTE

About Model
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Accuracy
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Time Evaluation
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OUTLINE

About Model

ABOUT MODEL: STRUCTURE

```
torch.Size([1, 2])
Number of parameters: 42072258.00
[INFO] Register count_convNd() for <class 'torch.nn.modules.conv.Conv2d'>.
[INFO] Register count_normalization() for <class 'torch.nn.modules.batchnorm.BatchNorm2d'>.
[INFO] Register zero_ops() for <class 'torch.nn.modules.pooling.MaxPool2d'>.
[INFO] Register zero_ops() for <class 'torch.nn.modules.dropout.Dropout'>.
[INFO] Register count_linear() for <class 'torch.nn.modules.linear.Linear'>.
The model has 648152576.0 FLOPs
```
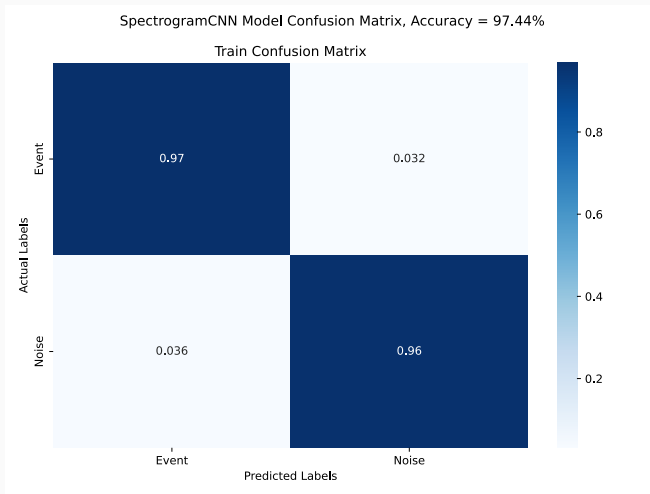
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ABOUT MODEL: STRUCTURE

Accuracy

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ACCURACY: CONFUSION MATRIX

SpectrogramCNN Model Confusion Matrix, Accuracy = 97.44%

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ACCURACY: ACCURACY CURVE

Time Evaluation

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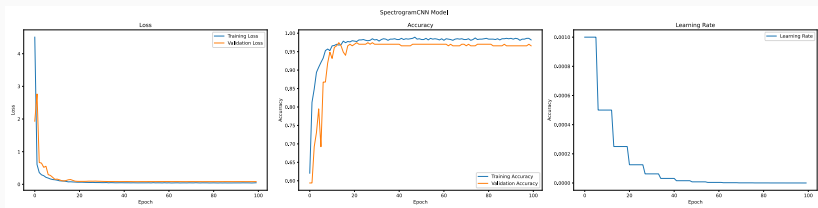
Time Evaluation
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TIME EVALUATION: ON LINUX PC

```
If execute on the Linux PC, check here
==============================================================================
Maximum time on Mac mini is:        69.976000 ms.
Average time on Mac mini is:        12.582552 ms.
Standard dev on Mac mini is:         3.194686 ms.
------------------------------------------------------------------------------
Maximum time on Raspberry Pi 4b should be:      538.276923 ms.
Average time on Raspberry Pi 4b should be:       96.788859 ms.
Standard dev on Raspberry Pi 4b should be:        8.860465 ms.
==============================================================================
```

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TIME EVALUATION: ON MAC MINI

```
If execute on the Mac mini, check here
================================================================================
Maximum time on Mac mini is:        69.976000 ms.
Average time on Mac mini is:        12.582552 ms.
Standard dev on Mac mini is:         3.194686 ms.
--------------------------------------------------------------------------------
Maximum time on Raspberry Pi 4b should be:      496.283688 ms.
Average time on Raspberry Pi 4b should be:       89.237955 ms.
Standard dev on Raspberry Pi 4b should be:        8.507826 ms.
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TIME EVALUATION: ON MACBOOK 2017

```
If execute on the Macbook 2017, check here
================================================================================
Maximum time on Mac mini is:        69.976000 ms.
Average time on Mac mini is:        12.582552 ms.
Standard dev on Mac mini is:         3.194686 ms.
--------------------------------------------------------------------------------
Maximum time on Raspberry Pi 4b should be:     171.826346 ms.
Average time on Raspberry Pi 4b should be:      30.896506 ms.
Standard dev on Raspberry Pi 4b should be:       5.006088 ms.
================================================================================
```