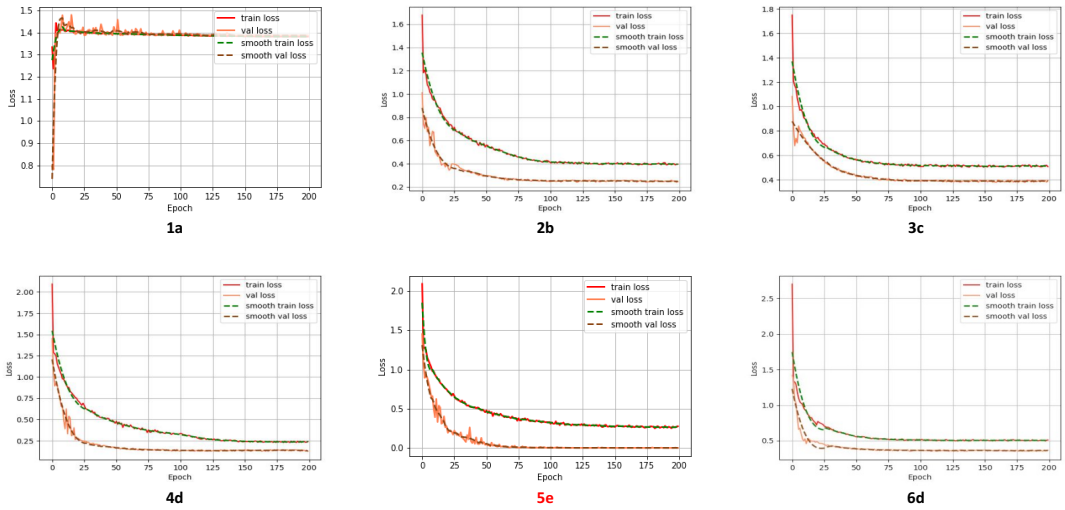
Appendix

In this appendix, we show the loss graphs of the model in this paper and 7 comparison models during 6 training sessions, and the train loss and val loss are recorded in each graph. The changes in loss shown in these figures can help readers better understand the training and performance of each model. Since each training is performed under different parameter values (see Table 6 for specific training parameter values), here we mark each different parameter combination. That is, a is "Adam + Min-Max learning rate_1", b is "Adam + Min-Max learning rate_2", c is "Adam + Min-Max learning rate_3", d is "SGD + Min-Max learning rate_1", e is "SGD + Min-Max learning rate_2", and f is "SGD + Min-Max learning rate_3". Min-Max learning rate_1, Min-Max learning rate_2, and Min-Max learning rate_3 here represent the values of Min-Max learning rate 0.01-0.0001, 0.001-0.00001, and 0.0001-0.000001, respectively. Of course, the values of other parameters remain unchanged during training, so there is no labeling here, but choose to label parameters with multiple values. In addition, when the font color below the figure is red, it indicates that the model can achieve the optimal train loss and val loss during the training process under the premise of the current parameter combination.

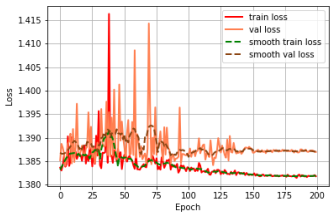
The change graph of the loss value of the proposed model.



1a 2b 3c

4d 5e 6d

The change graph of the loss value of VGG-16 model.



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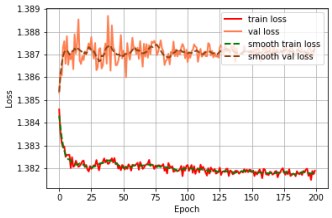

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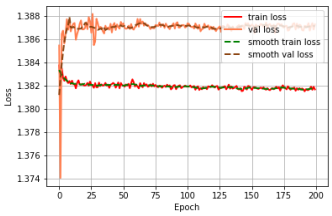

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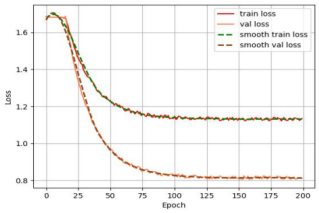

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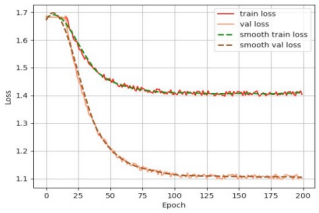

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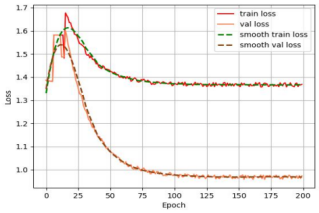
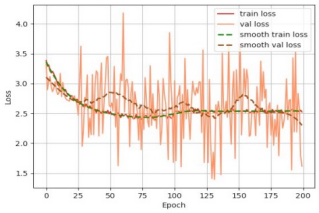


6f

The change graph of the loss value of ResNet-50 model.



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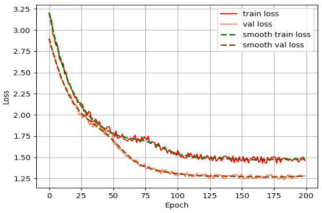

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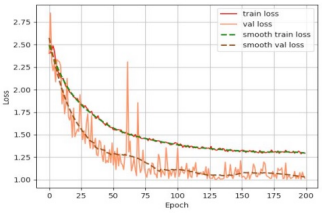

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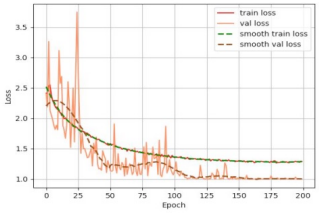

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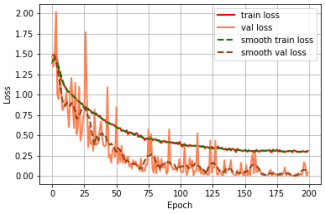

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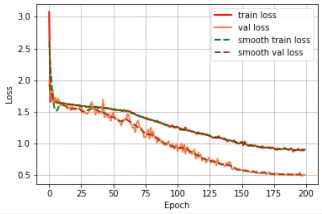
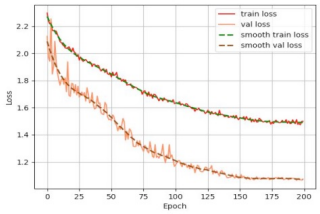


6f

The change graph of the loss value of MobileNet-V2 model.



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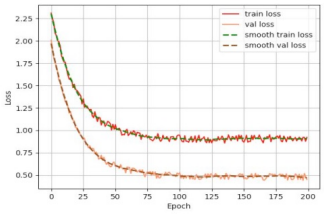

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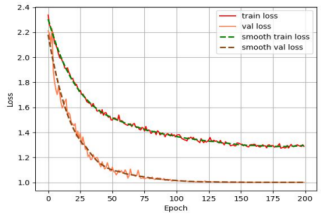

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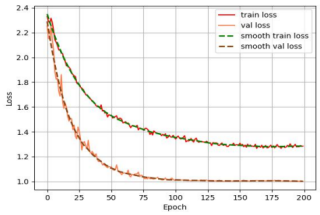

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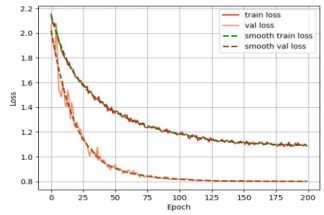

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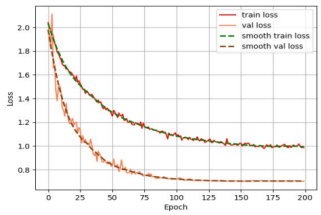

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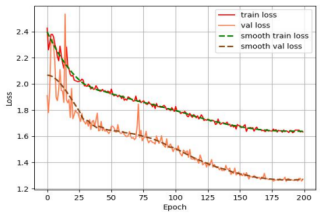
The change graph of the loss value of ResNet50+CBAM model.



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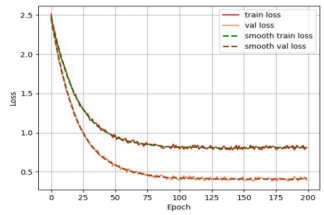

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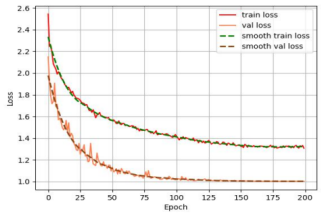

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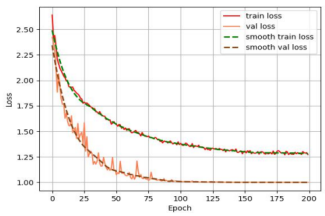

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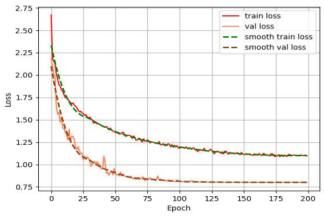

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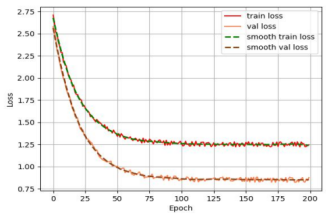

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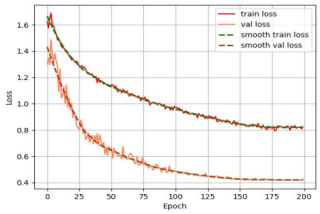
The change graph of the loss value of Inception-V2 model.



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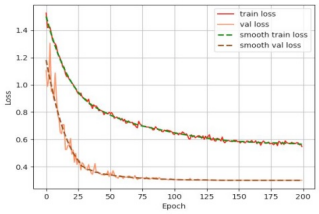

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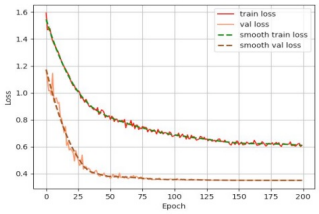

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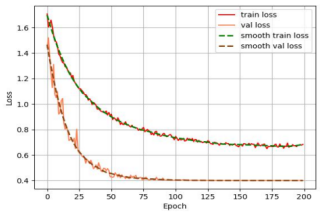

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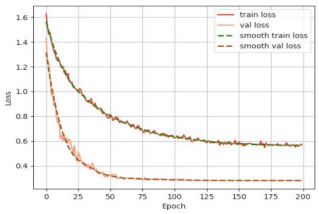

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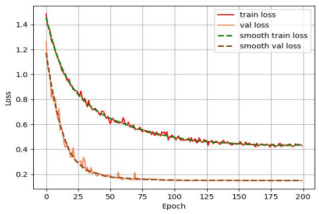
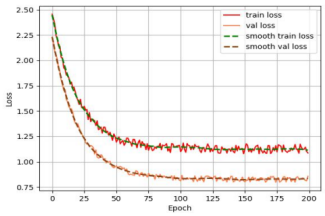


6f

The change graph of the loss value of EfficientNet-B1 model.



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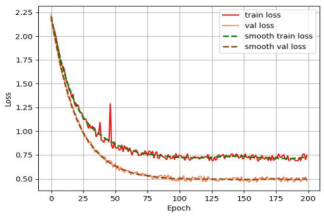

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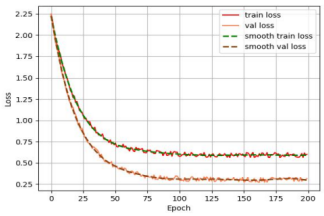

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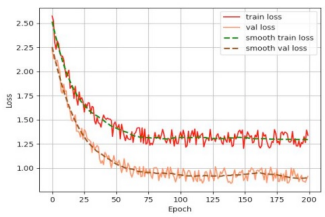

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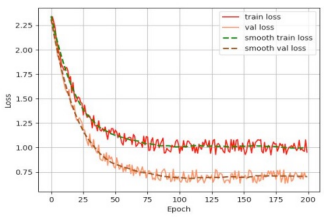

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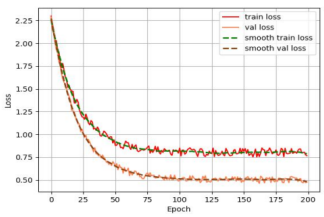
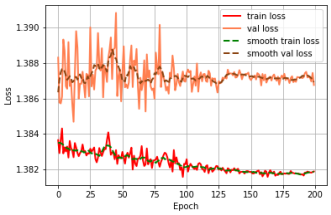


6f

The change graph of the loss value of GoogLeNet model.



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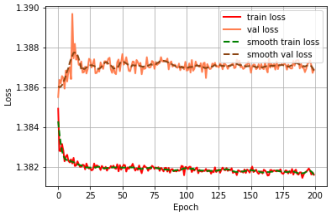

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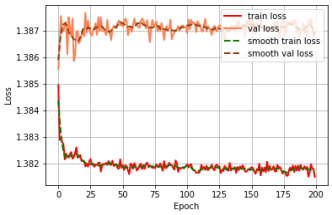

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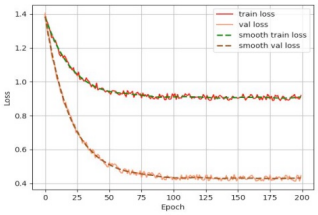

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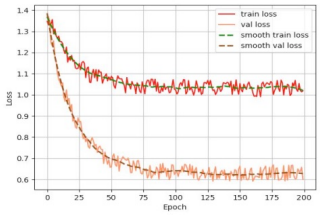

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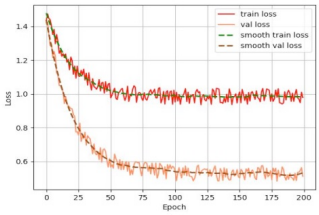

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