# 数据集加载文件loader

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| --- | --- |
| 数据集加载文件各个版本 | 如无特殊说明，与上一个的差异 |
| attributes\_loader.py | 只有race、gender、emotion、age |
| attributes\_loader\_2.py | 多一个mask |
| attributes\_loader\_3.py | 多一个blink |
| attributes\_loader\_4.py | 多一个race\_others |
| attributes\_loader\_4\_new.py | 多一个age\_range2、range3、range4 |
| attributes\_loader\_7.py | 相比4的emotion类别增加到5个（包含others） |
| attributes\_loader\_9.py | emotion类别增加到8个（包含others） |
| attributes\_loader\_9\_EmoOnly.py | 筛除掉HonorSmile和无效的emotion数据 |
| attributes\_loader\_9\_FIX.py | 相比9增加了blink\_l和blink\_r，筛除掉FIX的无效数据 |
| attributes\_loader\_9\_FIX\_newRaceOrder.py | race人种类别重新编码，在9\_FIX中，white-0,yellow-1,black-2,others-3，在此处，others-0,white-1,yellow-2,black-3 |
| attributes\_loader\_9\_FLEX.py | 相比9\_FIX，加入对HonorDB数据集年龄类别的阈值判断，筛除掉FLEX的无效数据 |

# 数据集

|  |  |  |
| --- | --- | --- |
| A01 | FaceAttributeLoader | ./datasets |
| A02 | /workspace/FaceAttributes/FaceAttributesCombine/src2\_childDetection\_multiEmotion/datasets |
| A03 | /workspace/FaceAttributes/FaceAttributesCombine/src2\_childDetection\_8Emotion/datasets |
| A04 | /workspace/FaceAttributes/FaceAttributesCombine/src2\_childDetection\_8Emotion\_LREyes/datasets |
| A05 | /workspace/FaceAttributes/FaceAttributesCombine/src2\_childDetection\_multiEmotion\_2/datasets |
| B01 | RAFDBSetLoader | /workspace/datasets/RAF-DB/basic |
| C01 | RaceInferenceLoader | /workspace/race\_face/dataset/test |
| D01 | FaceAttributeInferenceLoader | /workspace/datasets/FaceBeautyImg/imgs\_cropped |
| E01 | EmotionInferenceLoader | /data0/h00021291/emotion/test\_for\_mobile |

# 主干网络文件backbone

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| --- | --- | --- |
| models/下主干.py文件 | 主干网络各个版本 | 如无特殊说明，与上一个的差异 |
| backbone.py | MobileNetV1 | 返回race,gender,emotion,age |
| backbone.py | MobileNetV1\_0\_1\_1 | 多一个mask |
| backbone.py | **MobileNetV1\_0\_1\_2** | 多一个blink |
| backbone.py | MobileNetV1\_v0\_2 | 相比MobileNetV1后面分类结构解耦，多分支结构，分别负责不同任务 |
| backbone.py | MobileNetV1\_v0\_2\_1 | 多一个mask |
| backbone\_FLEX.py | MobileNetV1\_v0\_2\_1 | 多一个blink\_l,blink\_r |
| backbone\_FLEX\_for\_ONNX.py | MobileNetV1\_0\_1\_2 | return race, gender, age |
| backbone\_FIX.py |  |  |
| backbone\_FIX\_for\_ONNX.py | MobileNetV1\_0\_1\_2 | return race, gender, age |
| backbone\_FIX.py |  | 梯度传播只在race、gender、age |
| backbone\_FLEX.py |  | 梯度传播只在emotion、mask、blink\_l、blink\_r |

# 训练文件train

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 训练的.py文件，前缀都是  train\_mobilenet | Backbone，这里展示的是models下面的哪个.py文件 | backbone.py文件中哪个版本的backbone | dataloader | 如无特殊说明，与上一个的差异 | 数据集 |
| V1\_v0.1 | backbone | V1 | attributes\_loader |  |  |
| V1\_v0.1.1 | backbone | V1\_0\_1\_1 | attributes\_loader\_2 |  |  |
| V1\_v0.1.2 | backbone | V1\_0\_1\_2 | attributes\_loader\_3 |  |  |
| V1\_v0.1.3 | backbone | V1\_0\_1\_2 | attributes\_loader\_4 | race\_classes，3->4 |  |
| V1\_v0.1.4 | backbone | V1\_0\_1\_2 | attributes\_loader\_4\_new | age\_classes,5->2 |  |
| V1\_v0.2 | backbone | V1\_v0\_2 | attributes\_loader |  |  |
| V1\_v0.2.1 | backbone | V1\_v0\_2 | attributes\_loader\_2 | loader->loader\_2 |  |
| V1\_v0.3.0 | backbone | V1\_0\_1\_2 | attributes\_loader\_7 | 多mask,blink |  |
| V1\_v0.3.0\_ArcFace | backbone | V1\_0\_1\_2 | attributes\_loader\_7 |  |  |
| V1\_v0.3.1\_FocalLoss | backbone | V1\_0\_1\_2 | attributes\_loader\_7 |  |  |
| V1\_v0.3.2\_OHEM | backbone | V1\_0\_1\_2 | attributes\_loader\_7 |  |  |
| V1\_v0.3.3\_LabelSmooth | backbone | V1\_0\_1\_2 | attributes\_loader\_7 |  |  |
| V1\_v0.3.4\_LabelSmooth | backbone | V1\_0\_1\_2 | attributes\_loader\_9 |  |  |
| V1\_v0.3.5\_LabelSmooth\_8\_Emo | backbone | V1\_0\_1\_2 | attributes\_loader\_9 |  |  |
| V1\_v0.3.5\_LabelSmooth\_EmoOnly | backbone\_Emotion\_Only | V1\_0\_1\_2 | attributes\_loader\_9\_emo\_Only |  |  |
| V1\_v0.3.5\_LabelSmooth\_EmoOnly\_ArcFace | backbone\_Emotion\_Only | V1\_0\_1\_2 | attributes\_loader\_9\_emo\_Only |  |  |
| V1\_v0.3.5\_LabelSmooth\_EmoOnly\_autoAug | backbone\_Emotion\_Only | V1\_0\_1\_2 | attributes\_loader\_9\_emo\_Only |  |  |
| V1\_v0.3.5\_LabelSmooth\_EmoOnly\_woPenalty | backbone\_Emotion\_Only | V1\_0\_1\_2 | attributes\_loader\_9\_emo\_Only |  |  |
| V1\_v0.3.5\_LabelSmooth \_FIX\_ATTR | backbone\_FIX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |  |
| V1\_v0.3.5\_LabelSmooth \_FIX\_ATTR\_SingleEyes | backbone\_FIX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |  |
| V1\_v0.3.5\_LabelSmooth \_FLEX\_ATTR | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX |  |  |
| V1\_v0.3.5\_LabelSmooth \_FLEX\_ATTR\_newEyes | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX |  |  |
| V1\_v0.3.5\_LabelSmooth\_FLEX\_ATTR\_newEyes\_FineTune | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX |  |  |
| V1\_v0.3.5\_LabelSmooth\_FLEX\_ATTR\_newEyes\_Three\_Emotion | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX\_Three\_Emotion |  |  |
| V2\_lite\_2\_v0.1.3 | mobilenet\_v2\_lite\_2 | V2\_lite\_2 | attributes\_loader\_4 |  |  |
| V2\_lite\_v0.1.3 | mobilenet\_v2\_lite\_2 | V2\_lite\_2 | attributes\_loader\_4 |  |  |
| V2\_ v0.1.3 | mobilenet\_v2 | V2 | attributes\_loader\_4 |  |  |
| V2\_ v0.3.0 | mobilenet\_v2 | V2 | attributes\_loader\_7 |  |  |
| V2\_v0.3.5\_LabelSmooth\_EmoOnly | mobilenet\_v2\_Emotion\_Only | V2 | attributes\_loader\_9\_emo\_Only |  |  |
| V2\_v0.3.5\_LabelSmooth\_EmoOnly\_autoAug | mobilenet\_v2\_Emotion\_Only | V2 | attributes\_loader\_9\_emo\_Only |  |  |
| V2\_v0.3.5\_LabelSmooth\_EmoOnly\_OHEM | mobilenet\_v2\_Emotion\_Only | V2 | attributes\_loader\_9\_emo\_Only |  |  |

# 验证文件val

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 验证的.py文件，前缀都是  val\_mobilenet | Backbone，这里展示的是models下面的哪个.py文件 | backbone.py文件中哪个版本的backbone | dataloader | 如无特殊说明，与上一个的差异 |
| V1\_v0.1.2 | backbone | V1\_0\_1\_2 | attributes\_loader\_3 |  |
| V1\_v0.1.4 | backbone | V1\_0\_1\_2 | attributes\_loader\_3 |  |
| V1\_v0.1.5 | backbone | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX |  |
| V1\_v0.1.5\_emoOnly | backbone | V1\_0\_1\_2 | attributes\_loader\_9\_FLEX |  |
| V1\_v0.1.5\_FIX | backbone\_FIX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |
| V1\_v0.1.5\_FIX\_DIR | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |
| V1\_v0.1.5\_FLEX | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |
| V1\_v0.1.5\_FLEX\_GetBlinkError | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |
| V1\_v0.1.5\_FLEX\_Test | backbone\_FLEX | V1\_0\_1\_2 | attributes\_loader\_9\_FIX |  |
| V2\_v0.1.5 | mobilenet\_v2\_Emotion\_Only | V2 | attributes\_loader\_9\_FLEX |  |

MobileNetV1\_0\_1\_5\_1(

(stage1): Sequential(

(0): Sequential(

(0): Conv2d(3, 8, kernel\_size=(3, 3), stride=(2, 2), padding=(1, 1), bias=False)

(1): BatchNorm2d(8, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(2): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(1): Sequential(

(0): Conv2d(8, 8, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=8, bias=False)

(1): Conv2d(8, 16, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(16, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(2): Sequential(

(0): Conv2d(16, 16, kernel\_size=(3, 3), stride=(2, 2), padding=(1, 1), groups=16, bias=False)

(1): Conv2d(16, 32, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(3): Sequential(

(0): Conv2d(32, 32, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=32, bias=False)

(1): Conv2d(32, 32, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(4): Sequential(

(0): Conv2d(32, 32, kernel\_size=(3, 3), stride=(2, 2), padding=(1, 1), groups=32, bias=False)

(1): Conv2d(32, 64, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(5): Sequential(

(0): Conv2d(64, 64, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=64, bias=False)

(1): Conv2d(64, 64, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

)

(stage2): Sequential(

(0): Sequential(

(0): Conv2d(64, 64, kernel\_size=(3, 3), stride=(2, 2), padding=(1, 1), groups=64, bias=False)

(1): Conv2d(64, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(1): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(2): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(3): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(4): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

(5): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 128, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

)

)

(stage3): Sequential(

(0): Sequential(

(0): Conv2d(128, 128, kernel\_size=(3, 3), stride=(2, 2), padding=(1, 1), groups=128, bias=False)

(1): Conv2d(128, 256, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

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(1): Sequential(

(0): Conv2d(256, 256, kernel\_size=(3, 3), stride=(1, 1), padding=(1, 1), groups=256, bias=False)

(1): Conv2d(256, 256, kernel\_size=(1, 1), stride=(1, 1), bias=False)

(2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track\_running\_stats=True)

(3): LeakyReLU(negative\_slope=0.1, inplace=True)

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)

(avg): AdaptiveAvgPool2d(output\_size=(1, 1))

(race\_cls): Linear(in\_features=256, out\_features=3, bias=True)

(emotion\_cls): Linear(in\_features=256, out\_features=2, bias=True)

(gender\_cls): Linear(in\_features=256, out\_features=2, bias=True)

(age\_cls): Linear(in\_features=256, out\_features=101, bias=True)

(child\_cls): Linear(in\_features=256, out\_features=2, bias=True)

(mask\_cls): Linear(in\_features=256, out\_features=2, bias=True)

(blink\_cls\_l): Linear(in\_features=256, out\_features=2, bias=True)

(blink\_cls\_r): Linear(in\_features=256, out\_features=2, bias=True)

)