Multi-scale ResNet with shared weights. image $3 \times H \times W$ $3 \times H \times W$ ResNet18 id: respet1 path: respet.jsonnet id_share: respet_share AvgPool2d
id: downscale 1
kernel_size: 2
stride: 2 image $3 \times H \times W$ $3 \times H/2 \times W/2$ $\sqrt{3} \times H/2 \times W/2$ ResNet18 id: resnet2 path: resnet.jsonnet id_share: resnet_share Conv2d AvgPool2d id: downscale2 kernel_size: 2 stride: 2 id: conv1 bias: False kernel_size: 7 padding: 3 stride: 2 image $64 \times H/2 \times W/2$ $3 \times H/2 \times W/2$ $3 \times H/4 \times W/4$ ResNet18 id: resnet3 path: resnet.jsonnet id_share: resnet_share Conv2d id: conv1 bias: False kernel_size: 7 padding: 3 stride: 2 BatchNorm2d image $64 \times H/2 \times W/2$ $64 \times H/4 \times W/4$ $3 \times H/4 \times W/4$ Conv2d id: conv1 bias: False kernel_size: 7 padding: 3 stride: 2 **ReLU** BatchNorm2d $64 \times H/2 \times W/2$ $64 \times H/4 \times W/4$ $64 \times H/8 \times W/8$ MaxPool2d BatchNorm2d id: maxpool kernel_size: 3 padding: 1 stride: 2 ReLU $64 \times H/4 \times W/4$ $64 \times H/4 \times W/4$ $64 \times H/8 \times W/8$ MaxPool2d Sequential ReLU id: maxpool kernel_size: 3 padding: 1 stride: 2 id: layer1 blocks: 2 $64 \times H/4 \times W/4$ $64 \times H/8 \times W/8$ $64 \times H/8 \times W/8$ MaxPool2d Sequential Sequential id: maxpool kernel_size: 3 padding: 1 stride: 2 id: layer1 blocks: 2 $128 \times H/8 \times W/8$ $64 \times H/8 \times W/8$ $64 \times H/16 \times W/16$ Sequential

id: layer2
blocks: 2 Sequential Sequential id: layer1 blocks: 2 $64 \times H/16 \times W/16$ $256 \times H/16 \times W/16$ $128 \times H/16 \times W/16$ Sequential
id: layer4
blocks: 2 Sequential Sequential id: layer3 blocks: 2 id: layer2 blocks: 2 $512 \times H/32 \times W/32$ $256 \times H/32 \times W/32$ $128 \times H/32 \times W/32$ Sequential Sequential AdaptiveAvgPool2d id: layer4 blocks: 2 id: layer3 blocks: 2 $512 \times H/64 \times W/64$ $512 \times 1 \times 1$ $256 \times H/64 \times W/64$ Sequential

id: layer4
blocks: 2 Reshape AdaptiveAvgPool2d id: flatten reshape_spec: flatten $512 \times H/128 \times W/128$ 512 $512 \times 1 \times 1$ Reshape AdaptiveAvgPool2d Linear id: flatten reshape_spec: flatten 1000 512 $512 \times 1 \times 1$ Reshape
id: flatten
reshape_spec: flatten Linear logits 1000 512 Linear logits 1000 1000 logits 1000 1000 1000 logits