Interpolating+CAT:

We take network which its layers are: .

Let be the part of the network for the mixup interpolation part of the network and be the CAT part of the network.

First, we take a batch of examples where is an example in it and is its label. For the interpolation part. We will get:

.

In some way (need to be determined), we choose 2 hidden representations () from different examples () respectively and create a new mixed example:

which it's label will be such that our batch will now includes also the new example and its label .

The new batch created after these steps will be taken to the rest of the training which involves the adversarial example from cat, such that the algorithm shown in the CAT article will work now on hidden representations of the examples and produce adversarial examples from them.