tf.contrib.gan.losses.wargs.mutual_information_penalty

```
mutual_information_penalty(
    structured_generator_inputs,
    predicted_distributions,
    weights=1.0,
    scope='generator_modified_loss',
    loss_collection=tf.GraphKeys.LOSSES,
    reduction=losses.Reduction.SUM_BY_NONZERO_WEIGHTS,
    add_summaries=False
)
```

Defined in `tensorflow/contrib/gan/python/losses/python/losses_impl.py`.

Returns a penalty on the mutual information in an InfoGAN model.

This loss comes from an InfoGAN paper https://arxiv.org/abs/1606.03657.

Args:

- `structured_generator_inputs`: A list of Tensors representing the random noise that must have high mutual information with the generator output. List length should match `predicted_distributions`.
- `predicted_distributions`: A list of tf.Distributions. Predicted by the recognizer, and used to evaluate the likelihood of the structured noise. List length should match `structured_generator_inputs`.
- `weights`: Optional `Tensor` whose rank is either 0, or the same dimensions as `structured_generator_inputs`.
- `scope`: The scope for the operations performed in computing the loss.
- `loss_collection`: collection to which this loss will be added.
- `reduction`: A `tf.losses.Reduction` to apply to loss.
- `add_summaries`: Whether or not to add summaries for the loss.

Returns:

A scalar Tensor representing the mutual information loss.

Last updated November 2, 2017.

Support

Issue Tracker

Release Notes

Stack Overflow

English

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