

tf.contrib.gan.infogan_model

```
infogan_model(  
    generator_fn,  
    discriminator_fn,  
    real_data,  
    unstructured_generator_inputs,  
    structured_generator_inputs,  
    generator_scope='Generator',  
    discriminator_scope='Discriminator'  
)
```

Defined in [tensorflow/contrib/gan/python/train.py](#).

Returns an InfoGAN model outputs and variables.

See <https://arxiv.org/abs/1606.03657> for more details.

Args:

- `generator_fn`: A python lambda that takes a list of Tensors as inputs and returns the outputs of the GAN generator.
- `discriminator_fn`: A python lambda that takes `real_data` / `generated data` and `generator_inputs`. Outputs a 2-tuple of (logits, distribution_list). `logits` are in the range `[-inf, inf]`, and `distribution_list` is a list of Tensorflow distributions representing the predicted noise distribution of the `ith` structure noise.
- `real_data`: A Tensor representing the real data.
- `unstructured_generator_inputs`: A list of Tensors to the generator. These tensors represent the unstructured noise or conditioning.
- `structured_generator_inputs`: A list of Tensors to the generator. These tensors must have high mutual information with the recognizer.
- `generator_scope`: Optional generator variable scope. Useful if you want to reuse a subgraph that has already been created.
- `discriminator_scope`: Optional discriminator variable scope. Useful if you want to reuse a subgraph that has already been created.

Returns:

An InfoGANModel namedtuple.

Raises:

- `ValueError`: If the generator outputs a Tensor that isn't the same shape as `real_data`.
- `ValueError`: If the discriminator output is malformed.

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