tf.contrib.gan.acgan_model

```
acgan_model(
    generator_fn,
    discriminator_fn,
    real_data,
    generator_inputs,
    one_hot_labels,
    generator_scope='Generator',
    discriminator_scope='Discriminator',
    check_shapes=True
)
```

Defined in `tensorflow/contrib/gan/python/train.py`.

Returns an ACGANModel contains all the pieces needed for ACGAN training.

The `acgan_model` is the same as the `gan_model` with the only difference being that the discriminator additionally outputs logits to classify the input (real or generated). Therefore, an explicit field holding one_hot_labels is necessary, as well as a discriminator_fn that outputs a 2-tuple holding the logits for real/fake and classification.

See https://arxiv.org/abs/1610.09585 for more details.

Args:

- `generator_fn`: A python lambda that takes `generator_inputs` 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 tuple consisting of two Tensors: (1) real/fake logits in the range [-inf, inf] (2) classification logits in the range [-inf, inf]
- `real_data`: A Tensor representing the real data.
- `generator_inputs`: A Tensor or list of Tensors to the generator. In the vanilla GAN case, this might be a single noise Tensor. In the conditional GAN case, this might be the generator's conditioning.
- `one_hot_labels`: A Tensor holding one-hot-labels for the batch. Needed by acgan_loss.
- `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.
- `check_shapes`: If `True`, check that generator produces Tensors that are the same shape as real data. Otherwise, skip this check.

Returns:

A ACGANModel namedtuple.

Raises:

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

- `TypeError`: If the discriminator does not output a tuple consisting of (discrimination logits, classification logits).

Last updated November 2, 2017.