tf.contrib.bayesflow.entropy.entropy_shannon

```
entropy_shannon(
    p,
    z=None,
    n=None,
    seed=None,
    form=None,
    name='entropy_shannon'
)
```

Defined in `tensorflow/contrib/bayesflow/python/ops/entropy_impl.py`.

See the guide: BayesFlow Entropy (contrib) > Ops

Monte Carlo or deterministic computation of Shannon's entropy.

Depending on the kwarg `form`, this `Op` returns either the analytic entropy of the distribution `p`, or the sampled entropy:

```
-n^{-1} sum_{i=1}^n p.log_prob(z_i),  where z_i ~ p,
    \approx - E_p[ Log[p(Z)] ]
    = Entropy[p]
```

User supplies either `Tensor` of samples `z`, or number of samples to draw `n`

Args:

- `p`: `tf.contrib.distributions.Distribution`
- `z`: `Tensor` of samples from `p`, produced by `p.sample(n)` for some `n`.
- `n`: Integer `Tensor`. Number of samples to generate if `z` is not provided.
- `seed`: Python integer to seed the random number generator.
- `form`: Either `ELBOForms.analytic_entropy` (use formula for entropy of `q`) or `ELBOForms.sample` (sample estimate of entropy), or `ELBOForms.default` (attempt analytic entropy, fallback on sample). Default value is `ELBOForms.default`.
- `name`: A name to give this `Op`.

Returns:

A `Tensor` with same `dtype` as `p`, and shape equal to `p.batch_shape`.

Raises:

- `ValueError`: If `form` not handled by this function.
- `ValueError`: If `form` is `ELBOForms.analytic_entropy` and `n` was provided.

Last updated November 2, 2017.