TencorFlow

TensorFlow API r1.4

tf.histogram_fixed_width

```
histogram_fixed_width(
    values,
    value_range,
    nbins=100,
    dtype=tf.int32,
    name=None
)
```

Defined in tensorflow/python/ops/histogram_ops.py.

See the guide: Histograms > Histograms

Return histogram of values.

Given the tensor **values**, this operation returns a rank 1 histogram counting the number of entries in **values** that fell into every bin. The bins are equal width and determined by the arguments **value_range** and **nbins**.

Args:

- values: Numeric Tensor.
- value_range: Shape [2] Tensor of same dtype as values . values <= value_range[0] will be mapped to hist[0],
 values >= value_range[1] will be mapped to hist[-1].
- nbins: Scalar int32 Tensor. Number of histogram bins.
- · dtype: dtype for returned histogram.
- name: A name for this operation (defaults to 'histogram_fixed_width').

Returns:

A 1-D Tensor holding histogram of values.

Examples:

```
# Bins will be: (-inf, 1), [1, 2), [2, 3), [3, 4), [4, inf)
nbins = 5
value_range = [0.0, 5.0]
new_values = [-1.0, 0.0, 1.5, 2.0, 5.0, 15]

with tf.get_default_session() as sess:
    hist = tf.histogram_fixed_width(new_values, value_range, nbins=5)
    variables.global_variables_initializer().run()
    sess.run(hist) => [2, 1, 1, 0, 2]
```

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