

## tf.contrib.data.group\_by\_window

```
group_by_window(  
    key_func,  
    reduce_func,  
    window_size=None,  
    window_size_func=None  
)
```

Defined in [tensorflow/contrib/data/python/ops/grouping.py](#).

A transformation that groups windows of elements by key and reduces them.

This transformation maps each consecutive element in a dataset to a key using `key_func` and groups the elements by key. It then applies `reduce_func` to at most `window_size_func(key)` elements matching the same key. All except the final window for each key will contain `window_size_func(key)` elements; the final window may be smaller.

You may provide either a constant `window_size` or a window size determined by the key through `window_size_func`.

### Args:

- `key_func`: A function mapping a nested structure of tensors (having shapes and types defined by `self.output_shapes` and `self.output_types`) to a scalar `tf.int64` tensor.
- `reduce_func`: A function mapping a key and a dataset of up to `batch_size` consecutive elements matching that key to another dataset.
- `window_size`: A `tf.int64` scalar `tf.Tensor`, representing the number of consecutive elements matching the same key to combine in a single batch, which will be passed to `reduce_func`. Mutually exclusive with `window_size_func`.
- `window_size_func`: A function mapping a key to a `tf.int64` scalar `tf.Tensor`, representing the number of consecutive elements matching the same key to combine in a single batch, which will be passed to `reduce_func`. Mutually exclusive with `window_size`.

### Returns:

A `Dataset` transformation function, which can be passed to [tf.data.Dataset.apply](#).

### Raises:

- `ValueError`: if neither or both of `{window_size, window_size_func}` are passed.

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