

tf.nn.fused_batch_norm

```
fused_batch_norm(  
    x,  
    scale,  
    offset,  
    mean=None,  
    variance=None,  
    epsilon=0.001,  
    data_format='NHWC',  
    is_training=True,  
    name=None  
)
```

Defined in [tensorflow/python/ops/nn_impl.py](#).

See the guide: [Neural Network > Normalization](#)

Batch normalization.

As described in <http://arxiv.org/abs/1502.03167>.

Args:

- **x**: Input **Tensor** of 4 dimensions.
- **scale**: A **Tensor** of 1 dimension for scaling.
- **offset**: A **Tensor** of 1 dimension for bias.
- **mean**: A **Tensor** of 1 dimension for population mean used for inference.
- **variance**: A **Tensor** of 1 dimension for population variance used for inference.
- **epsilon**: A small float number added to the variance of x.
- **data_format**: The data format for x. Either "NHWC" (default) or "NCHW".
- **is_training**: A bool value to specify if the operation is used for training or inference.
- **name**: A name for this operation (optional).

Returns:

- **y**: A 4D Tensor for the normalized, scaled, offsetted x.
- **batch_mean**: A 1D Tensor for the mean of x.
- **batch_var**: A 1D Tensor for the variance of x.

Raises:

- **ValueError**: If mean or variance is not None when is_training is True.

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