

tf.contrib.layers.shared_embedding_columns

```
shared_embedding_columns(  
    sparse_id_columns,  
    dimension,  
    combiner='mean',  
    shared_embedding_name=None,  
    initializer=None,  
    ckpt_to_load_from=None,  
    tensor_name_in_ckpt=None,  
    max_norm=None,  
    trainable=True  
)
```

Defined in [tensorflow/contrib/layers/python/layers/feature_column.py](#).

See the guide: [Layers \(contrib\) > Feature columns](#)

Creates a list of `_EmbeddingColumn` sharing the same embedding.

Args:

- `sparse_id_columns`: An iterable of `_SparseColumn`, such as those created by `sparse_column_with_*` or `crossed_column` functions. Note that `combiner` defined in each `sparse_id_column` is ignored.
- `dimension`: An integer specifying dimension of the embedding.
- `combiner`: A string specifying how to reduce if there are multiple entries in a single row. Currently "mean", "sqnrn" and "sum" are supported, with "mean" the default. "sqnrn" often achieves good accuracy, in particular with bag-of-words columns. Each of this can be thought as example level normalizations on the column:
 - "sum": do not normalize
 - "mean": do l1 normalization
 - "sqnrn": do l2 normalization For more information: `tf.embedding_lookup_sparse`.
- `shared_embedding_name`: (Optional). A string specifying the name of shared embedding weights. This will be needed if you want to reference the shared embedding separately from the generated `_EmbeddingColumn`.
- `initializer`: A variable initializer function to be used in embedding variable initialization. If not specified, defaults to `tf.truncated_normal_initializer` with mean 0.0 and standard deviation $1/\sqrt{\text{len}(\text{sparse_id_columns})}$.
- `ckpt_to_load_from`: (Optional). String representing checkpoint name/pattern to restore the column weights. Required if `tensor_name_in_ckpt` is not None.
- `tensor_name_in_ckpt`: (Optional). Name of the `Tensor` in the provided checkpoint from which to restore the column weights. Required if `ckpt_to_load_from` is not None.
- `max_norm`: (Optional). If not None, embedding values are l2-normalized to the value of `max_norm`.
- `trainable`: (Optional). Should the embedding be trainable. Default is True

Returns:

A tuple of `_EmbeddingColumn` with shared embedding space.

Raises:

- `ValueError` : if `sparse_id_columns` is empty, or its elements are not compatible with each other.
- `TypeError` : if `sparse_id_columns` is not a sequence or is a string. If at least one element of `sparse_id_columns` is not a `SparseColumn` or a `WeightedSparseColumn`.

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