tf.contrib.factorization.gmm

```
gmm(
    inp,
    initial_clusters,
    num_clusters,
    random_seed,
    covariance_type=FULL_COVARIANCE,
    params='wmc'
)
```

Defined in **tensorflow/contrib/factorization/python/ops/gmm_ops.py** .

Creates the graph for Gaussian mixture model (GMM) clustering.

Args:

- `inp` : An input tensor or list of input tensors
- `initial_clusters` : Specifies the clusters used during initialization. Can be a tensor or numpy array, or a function that generates the clusters. Can also be "random" to specify that clusters should be chosen randomly from input data. Note: type is diverse to be consistent with skflow.
- `num_clusters` : number of clusters.
- `random_seed` : Python integer. Seed for PRNG used to initialize centers.
- `covariance_type` : one of "diag", "full".
- `params` : Controls which parameters are updated in the training process. Can contain any combination of "w" for weights, "m" for means, and "c" for covars.

Returns:

- `Note` : tuple of lists returned to be consistent with skflow A tuple consisting of:
- `all_scores` : A matrix (or list of matrices) of dimensions (num_input, num_clusters) where the value is the distance of an input vector and a cluster center.
- `assignments` : A vector (or list of vectors). Each element in the vector corresponds to an input row in 'inp' and specifies the cluster id corresponding to the input.
- `scores` : Similar to assignments but specifies the distance to the assigned cluster instead.
- `training_op` : an op that runs an iteration of training.
- `init_op` : an op that runs the initialization.

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