

tf.nn.learned_unigram_candidate_sampler

```
learned_unigram_candidate_sampler(  
    true_classes,  
    num_true,  
    num_sampled,  
    unique,  
    range_max,  
    seed=None,  
    name=None  
)
```

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

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

Samples a set of classes from a distribution learned during training.

This operation randomly samples a tensor of sampled classes (`sampled_candidates`) from the range of integers `[0, range_max)`.

The elements of `sampled_candidates` are drawn without replacement (if `unique=True`) or with replacement (if `unique=False`) from the base distribution.

The base distribution for this operation is constructed on the fly during training. It is a unigram distribution over the target classes seen so far during training. Every integer in `[0, range_max)` begins with a weight of 1, and is incremented by 1 each time it is seen as a target class. The base distribution is not saved to checkpoints, so it is reset when the model is reloaded.

In addition, this operation returns tensors `true_expected_count` and `sampled_expected_count` representing the number of times each of the target classes (`true_classes`) and the sampled classes (`sampled_candidates`) is expected to occur in an average tensor of sampled classes. These values correspond to $Q(y|x)$ defined in [this document](#). If `unique=True`, then these are post-rejection probabilities and we compute them approximately.

Args:

- `true_classes`: A `Tensor` of type `int64` and shape `[batch_size, num_true]`. The target classes.
- `num_true`: An `int`. The number of target classes per training example.
- `num_sampled`: An `int`. The number of classes to randomly sample.
- `unique`: A `bool`. Determines whether all sampled classes in a batch are unique.
- `range_max`: An `int`. The number of possible classes.
- `seed`: An `int`. An operation-specific seed. Default is 0.
- `name`: A name for the operation (optional).

Returns:

- `sampled_candidates`: A tensor of type `int64` and shape `[num_sampled]`. The sampled classes.
- `true_expected_count`: A tensor of type `float`. Same shape as `true_classes`. The expected counts under the sampling distribution of each of `true_classes`.

- `samplerd_expected_count` : A tensor of type `float` . Same shape as `samplerd_candidates` . The expected counts under the sampling distribution of each of `samplerd_candidates` .

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