

tf.nn.uniform_candidate_sampler

```
uniform_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 using a uniform base distribution.

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 the uniform distribution over the range of integers `[0, range_max)` .

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. The `sampled_candidates` return value will have shape `[num_sampled]` . If `unique=True` , `num_sampled` must be less than or equal to `range_max` .
- `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, either with possible duplicates (`unique=False`) or all unique (`unique=True`). In either case, `sampled_candidates` is independent of the true 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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