tf.nn.log_uniform_candidate_sampler

```
log_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 log-uniform (Zipfian) 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 an approximately log-uniform or Zipfian distribution:

`P(class) = (log(class + 2) - log(class + 1)) / log(range_max + 1)`

This sampler is useful when the target classes approximately follow such a distribution - for example, if the classes represent words in a lexicon sorted in decreasing order of frequency. If your classes are not ordered by decreasing frequency, do not use this op.

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

Last updated November 2, 2017.