tf.image.crop_and_resize

```
crop_and_resize(
    image,
    boxes,
    box_ind,
    crop_size,
    method='bilinear',
    extrapolation_value=0,
    name=None
)
```

Defined in `tensorflow/python/ops/gen_image_ops.py`.

See the guide: Images > Cropping

Extracts crops from the input image tensor and bilinearly resizes them (possibly

with aspect ratio change) to a common output size specified by `crop_size`. This is more general than the `crop_to_bounding_box` op which extracts a fixed size slice from the input image and does not allow resizing or aspect ratio change.

Returns a tensor with `crops` from the input `image` at positions defined at the bounding box locations in `boxes`. The cropped boxes are all resized (with bilinear interpolation) to a fixed `size = [crop_height, crop_width]`. The result is a 4-D tensor `[num_boxes, crop_height, crop_width, depth]`.

Args:

- `image`: A `Tensor`. Must be one of the following types: `uint8`, `int8`, `int16`, `int32`, `int64`, `half`, `float32`, `float64`. A 4-D tensor of shape `[batch, image_height, image_width, depth]`. Both `image_height` and `image_width` need to be positive.
- `boxes`: A `Tensor` of type `float32`. A 2-D tensor of shape `[num_boxes, 4]`. The `i`-th row of the tensor specifies the coordinates of a box in the `box_ind[i]` image and is specified in normalized coordinates `[y1, x1, y2, x2]`. A normalized coordinate value of `y` is mapped to the image coordinate at `y * (image_height - 1)`, so as the `[0, 1]` interval of normalized image height is mapped to `[0, image_height - 1]` in image height coordinates. We do allow `y1` > `y2`, in which case the sampled crop is an up-down flipped version of the original image. The width dimension is treated similarly. Normalized coordinates outside the `[0, 1]` range are allowed, in which case we use `extrapolation_value` to extrapolate the input image values.
- `box_ind`: A `Tensor` of type `int32`. A 1-D tensor of shape `[num_boxes]` with int32 values in `[0, batch)`. The value of `box_ind[i]` specifies the image that the `i`-th box refers to.
- `crop_size`: A `Tensor` of type `int32`. A 1-D tensor of 2 elements, `size = [crop_height, crop_width]`. All cropped image patches are resized to this size. The aspect ratio of the image content is not preserved. Both `crop_height` and `crop_width` need to be positive.
- `method`: An optional `string` from: `"bilinear"`. Defaults to `"bilinear"`. A string specifying the interpolation method. Only 'bilinear' is supported for now.
- `extrapolation_value`: An optional `float`. Defaults to `0`. Value used for extrapolation, when applicable.
- `name`: A name for the operation (optional).

Returns:

A `Tensor` of type `float32`. A 4-D tensor of shape `[num_boxes, crop_height, crop_width, depth]`.

Last updated November 2, 2017.